



LAND APPLICATION OF BIOSOLIDS
CHARLES ROSSON

LO 34 (FIELDS 1-8, 19-20, 22-27, 33, 43-
45, 51-73)
LOUISA COUNTY, VIRGINIA
JULY 2011
REVISED NOVEMBER 2015



November 13, 2015

Mr. Edward Stuart
Department of Environmental Quality
Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193

Dear Mr. Stuart:

Transmitted herein for your consideration is land application site for Charles Rosson (designated as LO 34, fields 1-8, 19-20, 22-27, 33, 43-45, 51-73), located in Louisa County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink that reads "C. Whiteside".

Carolanne M. Whiteside
Technical Services Coordinator



FIELD SUMMARY SHEET

Charles Rosson

LO 34

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FIELD TYPE	OWNER
34-01	28.2	27.2		Agriculture	Rosson, Charles & Elizabeth
34-02	40.6	38.8		Agriculture	Rosson, Charles & Elizabeth
34-03	25.4	22.9		Agriculture	Rosson, Charles
34-04	15.6	15.6		Agriculture	Rosson, Charles
34-05	49.1	42.0		Agriculture	Rosson, Charles
34-06	28.8	28.8		Agriculture	Rosson, Charles
34-07	28.4	27.7		Agriculture	Rosson, Charles
34-08	10.7	9.6		Agriculture	Nickle, Michael & Dianne
34-19	18.3	17.1		Agriculture	Patton, Dan & Robin
34-20	14.3	14.3		Agriculture	Patton, Dan & Robin
34-22	15.7	14.1		Agriculture	Merle - Smith, Grosvenor & Rosemarie
34-23	21.5	21.5		Agriculture	Merle - Smith, Grosvenor & Rosemarie
34-24	41.7	41.0		Agriculture	Merle - Smith, Grosvenor & Rosemarie
34-25	8.0	7.3		Agriculture	Merle - Smith, Grosvenor & Rosemarie
34-26	46.0	43.1		Agriculture	Merle - Smith, Grosvenor & Rosemarie
34-27	34.1	31.6		Agriculture	Morgan, Melaine A
34-33	48.3	42.9		Agriculture	Patton, Dan & Robin
					Stacey E. Mills
					Linda M. Mills
34-43	22.9	21.8		Agriculture	Quaker Hill Farm LLC
34-44	8.0	7.4		Agriculture	Quaker Hill Farm LLC
34-45	12.0	12.0		Agriculture	Lee & Joy Rosson
34-51	29.7	29.6		Agriculture	Mitchell, Jennifer
34-52	8.6	8.5		Agriculture	Mitchell, Jennifer
34-53	13.2	12.9		Agriculture	Mitchell, Jennifer
34-54	13.1	12.4		Agriculture	Mitchell, Jennifer
34-55	23.7	23.6		Agriculture	Mitchell, Jennifer
34-56	20.3	20.3		Agriculture	Mitchell, Jennifer
34-57	10.1	10.1		Agriculture	Mitchell, Jennifer

34-58	12.0	10.5		Agriculture	Mitchell, Jennifer
34-59	7.6	7.5		Agriculture	Mitchell, Jennifer
34-60	18.3	15.9		Agriculture	Mitchell, Jennifer
34-61	11.8	11.8		Agriculture	Mitchell, Jennifer
34-62	17.6	17.3		Agriculture	Mitchell, Jennifer
34-63	12.5	11.4		Agriculture	Mitchell, Jennifer
34-64	12.8	10.3		Agriculture	Mitchell, Jennifer
34-65	6.2	6.2		Agriculture	Mitchell, Jennifer
34-66	24.5	24.5		Agriculture	John Turner
34-67	17.1	17.1		Agriculture	Trevilian Station Battlefied
34-68	24.2	23.8		Agriculture	Trevilian Station Battlefied
34-69	14.8	13.1		Agriculture	Trevilian Station Battlefied
34-70	33.9	31.3		Agriculture	Rosson, Lee & Joy
34-71	13.1	13.1		Agriculture	Quaker Hill Farm LLC
34-72	22.8	22.8		Agriculture	Quaker Hill Farm LLC
34-73	25.5	24.4		Agriculture	Quaker Hill Farm LLC
TOTALS:	911.0	865.1			

Revised 11-12-2015

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

LO 34

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 2/28/12 between QHF LLC referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as Quaker Hill Farm, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
38-51			
38-17			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☐ I am the sole owner of the properties identified herein.
☒ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>Quaker Hill Farm LLC</u>	<u>By: Lee C. Rossen</u>	<u>5728 Peindexter</u>
Landowner - Printed Name	Signature	Mailing Address
		<u>Louisa VA 230</u>

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Lee C. Rossen</u>	<u>Lee C. Rossen</u>	<u>10647 Tidewater Trail</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		<u>Champlain VA 22438</u>

PART D-VI LAND APPLICATION AGREEMENT

Permittee: Synagro
Landowner: Rosson

Permit # or County: Louisa
Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Quaker Hill Farm LLC

Landowner's Signature

By: Dee C. Rosson

Date

2/28/12

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 2/28/12 between Rosson referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as Joy Lo - 34, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>38-15</u>			
<u>23-95</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

☐ I am the sole owner of the properties identified herein.

☒ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Lee C. Rosson

Signature

5732 Poindexter Rd

Mailing Address

Joy P. Rosson

Joy P. Rosson

Louisa VA 23093

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

Lee Rosson
Permittee - Authorized Representative
Printed Name

Signature

Mailing Address

Lee C. Rosson 10647 Tidewater Trail

Champlain, VA 22438

Permittee: Synagro
Landowner: Rosson

Permit # or County: Louisa
Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Joy P. Rosson
Landowner's Signature

Joy P. Rosson

2/28/12
Date

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

Page 1 of 2

Permittee: Synagro
Landowner: Morgan

Permit # or County: Louisa
Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Melanie Morgan
Landowner's Signature

3/26/12
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/26/12 between Morle-Smith referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO-34, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>52-91</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Rosemarie Morle-Smith 2701 Poudre Rd, Louisa
Landowner - Printed Name Signature Mailing Address

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

Lee C. Rosson Synagro
Permittee - Authorized Representative Signature Mailing Address
Printed Name 10647 Tidewater Trail
Champlain VA 22438

VIRGINIA POLLUTION ABATEMENT APPLICATION
PART D-VI LAND APPLICATION AGREEMENT

Page 2 of 2

Permittee: Synagro
Landowner: Merle-Smith

Permit # or County: Louisa
Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Rosemarie Merle-Smith 3/26/12
Landowner's Signature Date

PART D-VI: LAND APPLICATION AGREEMENT- BIOSOLIDS AND INDUSTRIAL RESIDUALS

Landowner:

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Page 1 of 2

VIRGINIA POLLUTION ABATEMENT APPLICATION
PART D-VI LAND APPLICATION AGREEMENT

Page 2 of 2

Permittee: Synagro Central, LLC
Landowner: TURNER

Permit # or County: Louisa
Farm Name or Address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days:
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

John Turner
Landowner's Signature
Rev 10/03/2011

6-12-12
Date

Permittee: Synagro Central, LLC

Permit # or County: Louisa

Landowner: Civil War Preservation Trust

Farm Name or Address: W-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days:
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Landowner's Signature

Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 2/3/13 between Nickle referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO-34, located in Louisa, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>38-24</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

☒ Class B biosolids ☒ Water treatment residuals ☐ Other industrial sludges (check all that apply)

Michael R. & Dianne H. Nickle
Michael R. Nickle
Landowner - Printed Name Signature

Bick House Rd
Louisa, VA 23093
Mailing Address

Permittee:

_____, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

LEE Rosson
Lee Rosson
Permittee - Authorized Representative Signature
Printed Name

10647 Tidewater Trail
Champlain, VA 22438
Mailing Address

Permittee: Synagro
Landowner: Nickle

Permit # or County: Louisa
Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Michael R. Nickle
Landowner's Signature
Michael R. Nickle

2-3-13
Date
2/3/13

VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 2/1/13 between mills referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO - 34, located in Louisa, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>53-12-3</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

☒ Class B biosolids ☒ Water treatment residuals ☒ Other industrial sludges (check all that apply)

Stacey E. & Linda M. Mills

Landowner - Printed Name

Signature

Stacey E. Mills
Linda M. Mills

Charlottesville VA

Mailing Address

22903

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

10647 Tidewater Trail

Champlain, VA 22438

LEE C. ROSSON

Permittee - Authorized Representative
Printed Name

Lee C. Rossion

Signature

Mailing Address

Permittee: Synagro
Landowner: mills

Permit # or County: Louisa
Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

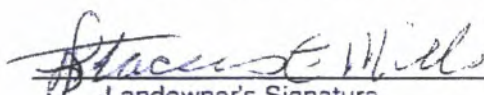
I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).


Landowner's Signature
Linda M. Mills

2/13/13
Date
2/13/13

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 2/23/13 between Mitchell referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as 10-34, located in Louisa, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>39-18</u>	<u>39-58</u>	<u>39-21</u>	
<u>39-57</u>	<u>39-24</u>	<u>39-21A</u>	
<u>39-59</u>	<u>39-22</u>	<u>39-25</u>	

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

☒ Class B biosolids ☒ Water treatment residuals ☒ Other industrial sludges (check all that apply)

Jenifer Lynn Harlow-Mitchell
Landowner - Printed Name

Jenifer H Mitchell
Signature

Waldrop Church Rd.
Mailing Address
Louisa VA 23093

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

LEE ROSSON
Permittee - Authorized Representative
Printed Name

Lee Rossion
Signature

10647 Tidewater Trail
Mailing Address
Champlain VA 22438

Permittee: Synagro
Landowner: Mitchell

Permit # or County: Louisa
Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).


Landowner's Signature

2/23/13
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/4/13 between Charles & Betty Rossen referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as Lot -34, located in Louisa, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>37-29</u>	<u>38-27</u>		
<u>37-30</u>	<u>37-47</u>		
<u>37-34</u>	<u>37-48</u>		

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

☐ Class B biosolids ☒ Water treatment residuals ☒ Other industrial sludges (check all that apply)

Elizabeth C. Rossen
Landowner - Printed Name

Signature

5728 Poundstone Rd
Louisa, VA 23095
Mailing Address

Permittee:

_____, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

LEE Rossen
Permittee - Authorized Representative
Printed Name

Signature

10647 Tidewater Trail
Champlain VA 22438
Mailing Address

VIRGINIA COLLECTION ABATEMENT AGREEMENT
PART D-VI LAND APPLICATION AGREEMENT

Permittee: Synagro

Permit # or County: Louisa

Landowner: Charles & Betty Rossen

Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Charles & Betty Rossen
Landowner's Signature

3/4/13
Date
3/4/13

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 2/21/13 between Patton referred to here as "Landowner", and _____ referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO - 34, located in Louisa, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>53-12-4</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

☒ Class B biosolids ☒ Water treatment residuals ☒ Other industrial sludges (check all that apply)

Dan M. Patton & Robin W. Patton

Dan M. Patton
Landowner - Printed Name

Signature

East Jack Jouett Rd Louisa VA 2309

Mailing Address

Permittee:

_____, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

10647 Tidewater Trail

Champlain, VA 22438

LEE ROSSON Lee C. Rossion
Permittee - Authorized Representative Signature
Printed Name

Mailing Address

PART D-VI LAND APPLICATION AGREEMENT

Permittee: Synagro

Permit # or County: Louisa

Landowner: Patton

Farm name or address: LO-34

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Don M. Patton Jr.
Landowner's Signature

2/21/13
2/21/13

TAX ID LANDOWNER IDENTIFICATION SHEET

Landowner	Field Number	Tax ID
Rosson, Charles & Elizabeth	34-01	37-29, 37-30
Rosson, Charles & Elizabeth	34-02	37-30, 37-34
Rosson, Charles	34-03	38-27, 37-47, 37-48
Rosson, Charles	34-04	37-48
Rosson, Charles	34-05	37-47, 37-48
Rosson, Charles	34-06	37-48
Rosson, Charles	34-07	37-48, 38-27
Nickle, Michael & Dianne	34-08	38-24
Patton, Dan & Robin	34-19	53-12-4
Patton, Dan & Robin	34-20	53-12-4
Merle - Smith, Grosvenor & Rosemarie	34-22	52-91
Merle - Smith, Grosvenor & Rosemarie	34-23	52-91
Merle - Smith, Grosvenor & Rosemarie	34-24	52-91
Merle - Smith, Grosvenor & Rosemarie	34-25	52-91
Merle - Smith, Grosvenor & Rosemarie	34-26	52-91
Morgan, Melaine A	34-27	52-83
Stacey E & Linda M Mills	34-33	53-12-3
Patton, Dan & Robin		53-12-4
Quaker Hill Farm LLC	34-43	38-51
Quaker Hill Farm LLC	34-44	38-51
Lee & Joy Rosson	34-45	23-95
Mitchell, Jennifer	34-51	39-24, 39-25
Mitchell, Jennifer	34-52	39-24
Mitchell, Jennifer	34-53	39-24
Mitchell, Jennifer	34-54	39-24
Mitchell, Jennifer	34-55	39-22, 39-24
Mitchell, Jennifer	34-56	39-22, 39-24
Mitchell, Jennifer	34-57	39-21, 39-21A,
Mitchell, Jennifer	34-58	39-22, 39-24
Mitchell, Jennifer	34-59	39-21, 39-21A,
Mitchell, Jennifer	34-60	39-18
Mitchell, Jennifer	34-61	39-18
Mitchell, Jennifer	34-62	39-18
Mitchell, Jennifer	34-63	39-18
Mitchell, Jennifer	34-64	39-57, 39-58, 39-59
Mitchell, Jennifer	34-65	39-24
John Turner	34-66	38-76
Trevilian Station Battlefied	34-67	24-15
Trevilian Station Battlefied	34-68	24-15
Trevilian Station Battlefied	34-69	24-15
Rosson, Lee & Joy	34-70	38-15
Quaker Hill Farm LLC	34-71	38-51
Quaker Hill Farm LLC	34-72	38-51
Quaker Hill Farm LLC	34-73	38-17

Field Number	Latitude (North)	Longitude (West)
34-01	38.016°	78.133°
34-02	38.013°	78.135°
34-03	38.011°	78.130°
34-04	38.016°	78.130°
34-05	38.015°	78.128°
34-06	38.016°	78.125°
34-07	38.012°	78.125°
34-08	38.016°	78.121°
34-19	37.997°	78.128°
34-20	38.000°	78.128°
34-22	37.990°	78.170°
34-23	37.989°	78.172°
34-24	37.992°	78.170°
34-25	37.998°	78.174°
34-26	37.993°	78.175°
34-27	37.981°	78.188°
34-33	37.995°	78.133°
34-43	38.027°	78.116°
34-44	38.023°	78.109°
34-45	38.024°	78.125°
34-51	38.019°	78.067°
34-52	38.018°	78.064°
34-53	38.017°	78.064°
34-54	38.016°	78.064°
34-55	38.014°	78.062°
34-56	38.012°	78.065°
34-57	38.010°	78.067°
34-58	38.013°	78.068°
34-59	38.009°	78.069°
34-60	38.007°	78.071°
34-61	38.007°	78.073°
34-62	38.006°	78.075°
34-63	38.004°	78.073°
34-64	38.002°	78.072°
34-65	38.019°	78.066°
34-66	38.019°	78.101°
34-67	38.060°	78.076°
34-68	38.061°	78.079°
34-69	38.059°	78.080°
34-70	38.023°	78.124°
34-71	38.021°	78.106°
34-72	38.020°	78.110°
34-73	38.021°	78.118°

Haul Route:

The Location maps in conjunction with the above latitude and longitude coordinates are a route planning tool meant to be a guide to indicate suggested haul routes for various preferences: to include but not limited to all federal, state, and local granted STAA access routes.



Tax Map ID 37-29



Scale: 1:9027.977411

Date: 05/16/2012

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Tax Map ID 37-30



Scale: 1:9027.977411

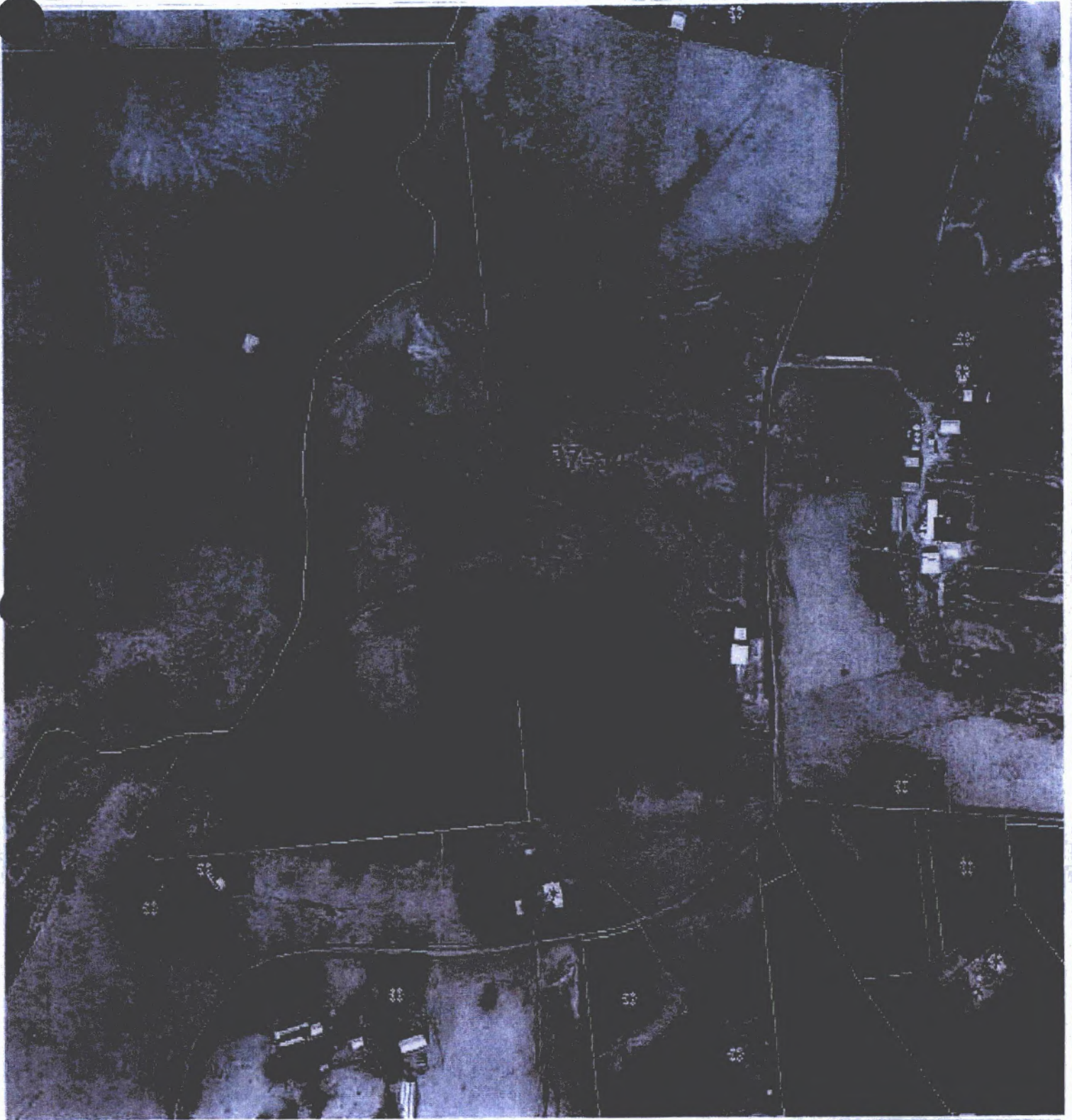
Date: 05/16/2012

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Tax Map ID 37-34



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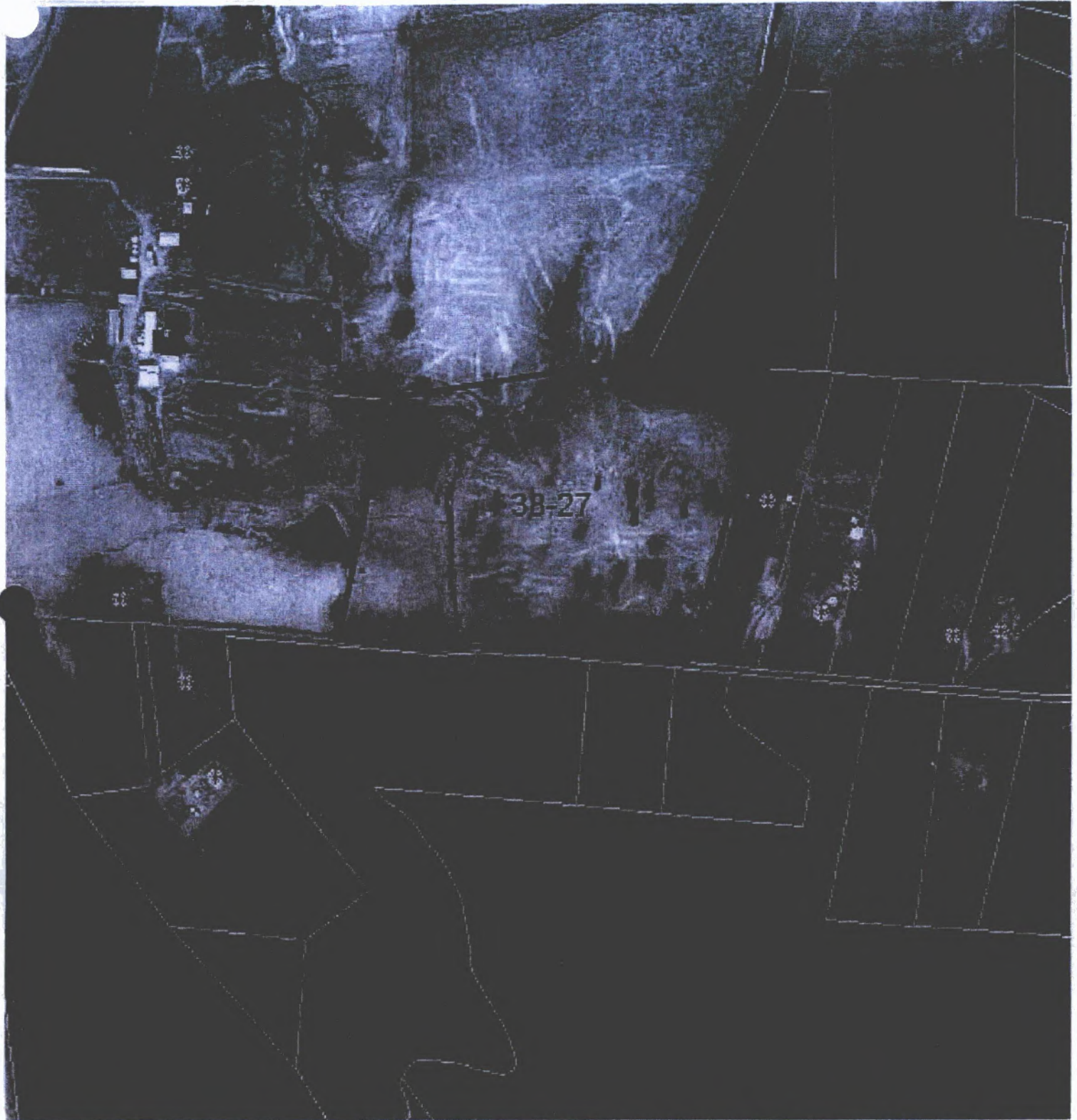
Date: 05/16/2012

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Tax Map ID 38-27



Scale: 1:9027.977411

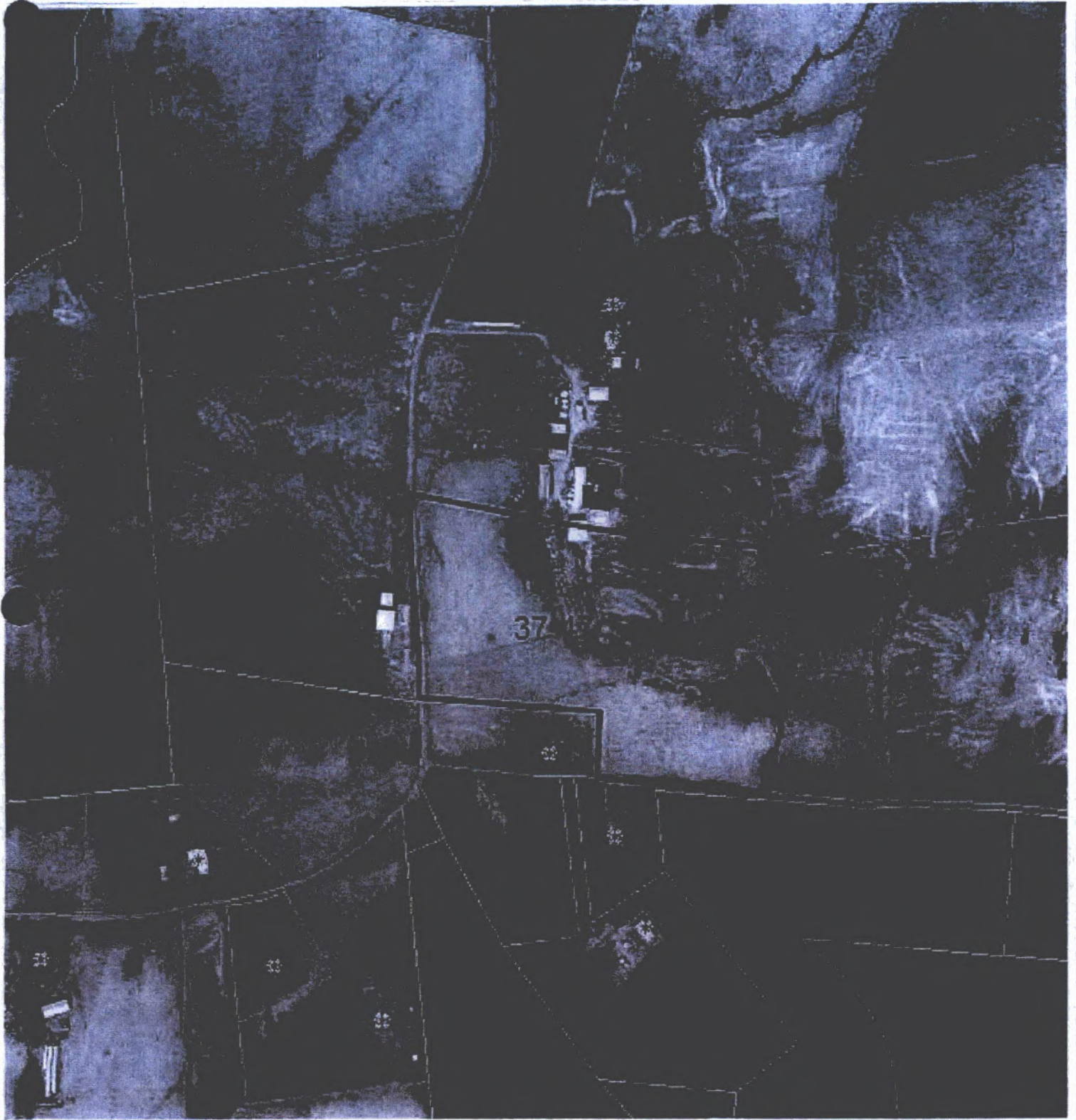
Date: 05/16/2012

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Tax Map ID 37-47



Scale: 1:9027.977411

Date: 05/16/2012

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Tax Map ID 37-48



Scale: 1:18055.954822

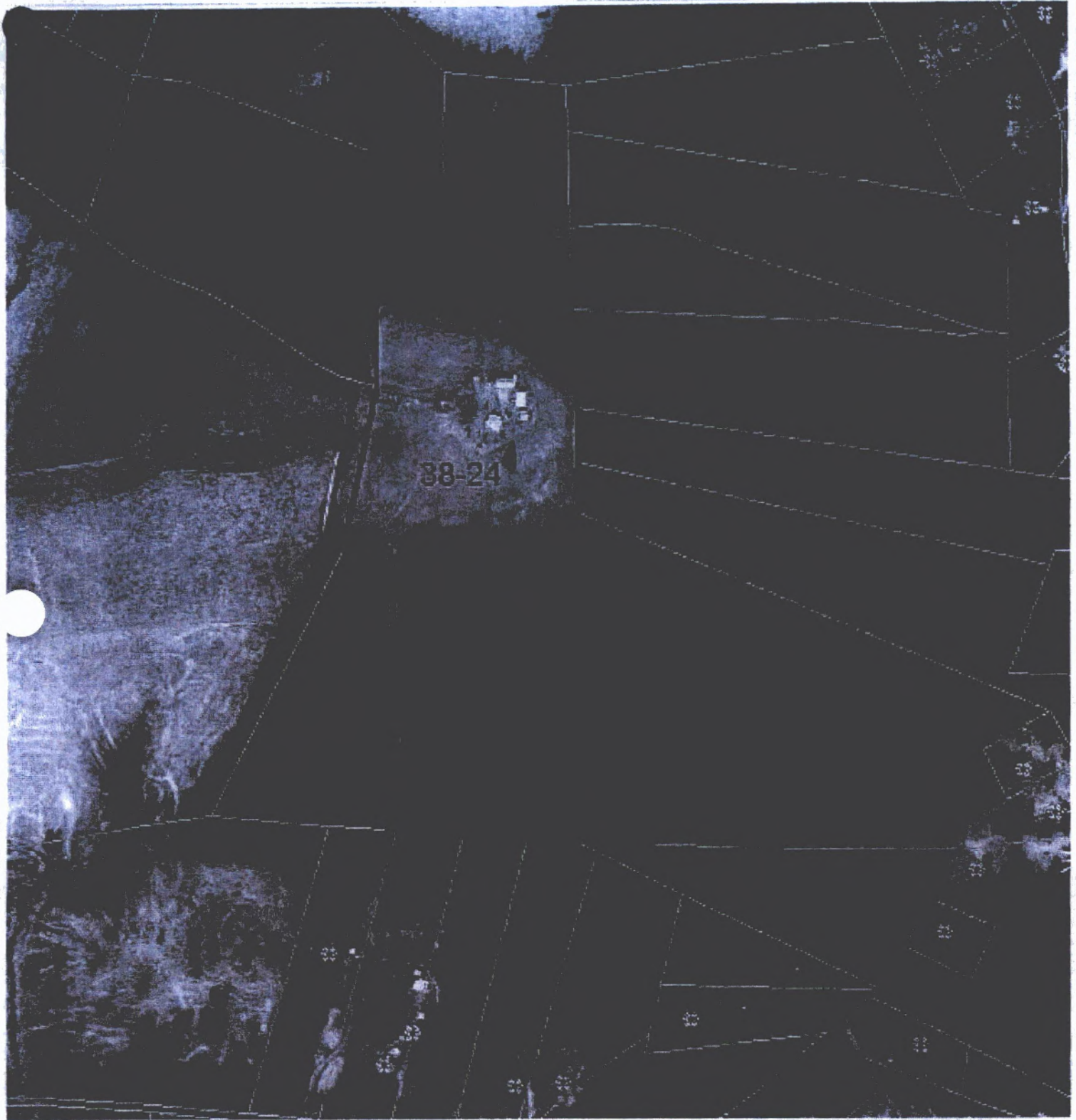
Date: 05/16/2012

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Tax Map ID 38-24



Scale: 1:9027.977411

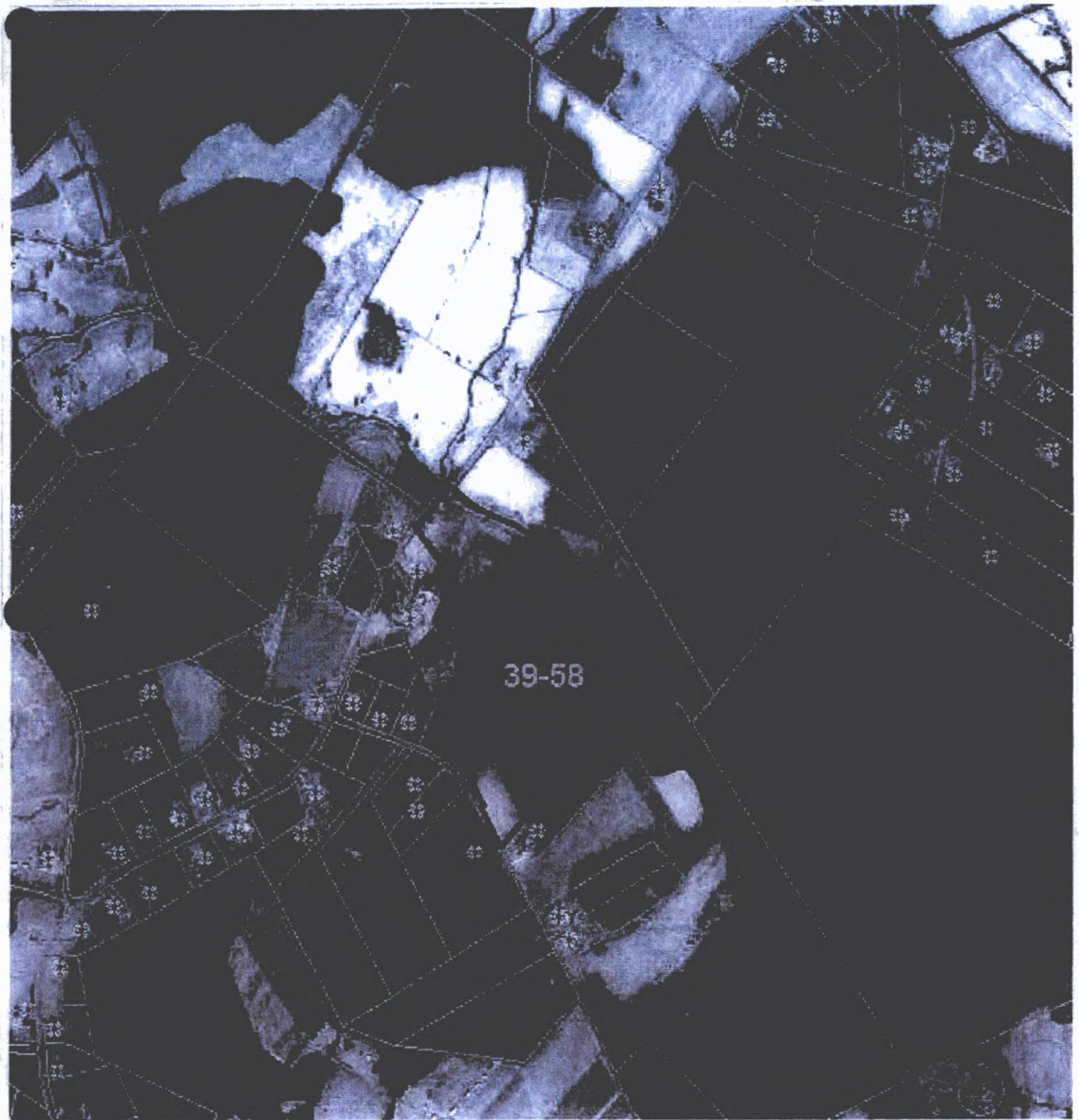
Date: 05/17/2012

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Tax Map ID 39-58



Scale: 1:18055.954822

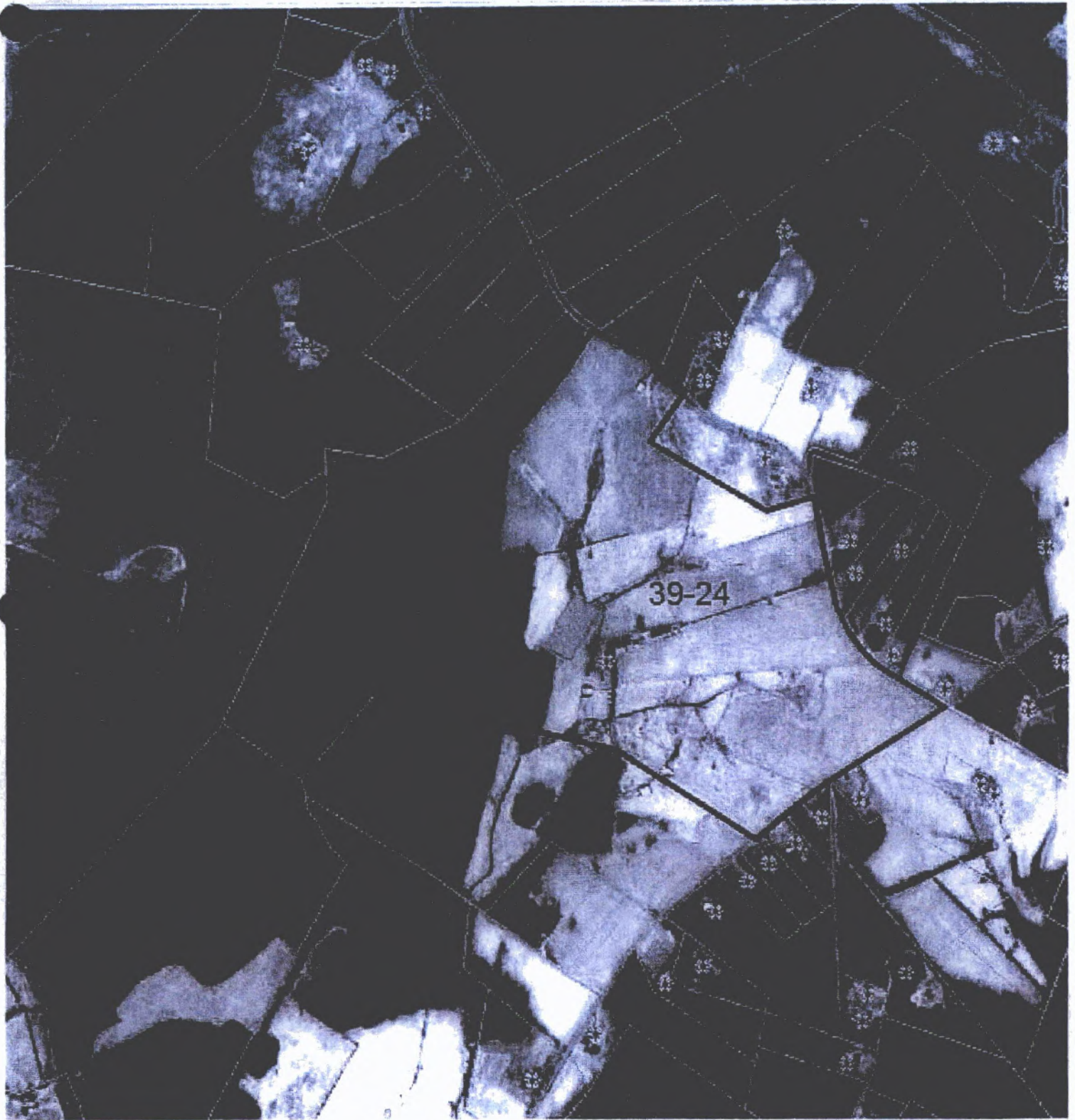
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tax Map ID 39-24



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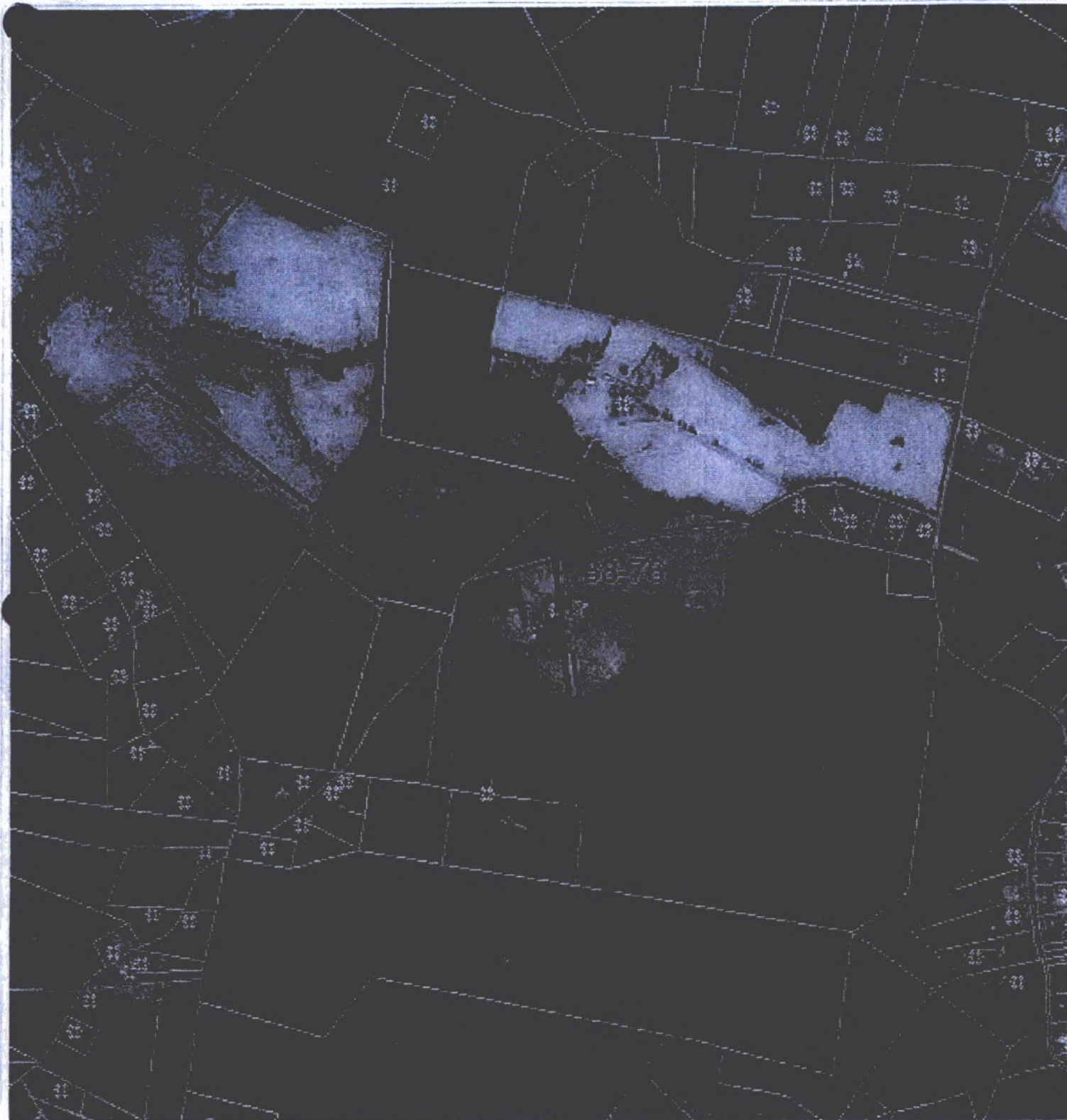
Date: 06/04/2012

Printed By: Carolanne Whiteside

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Tax Map ID 38-76



Scale: 1:18055.954822

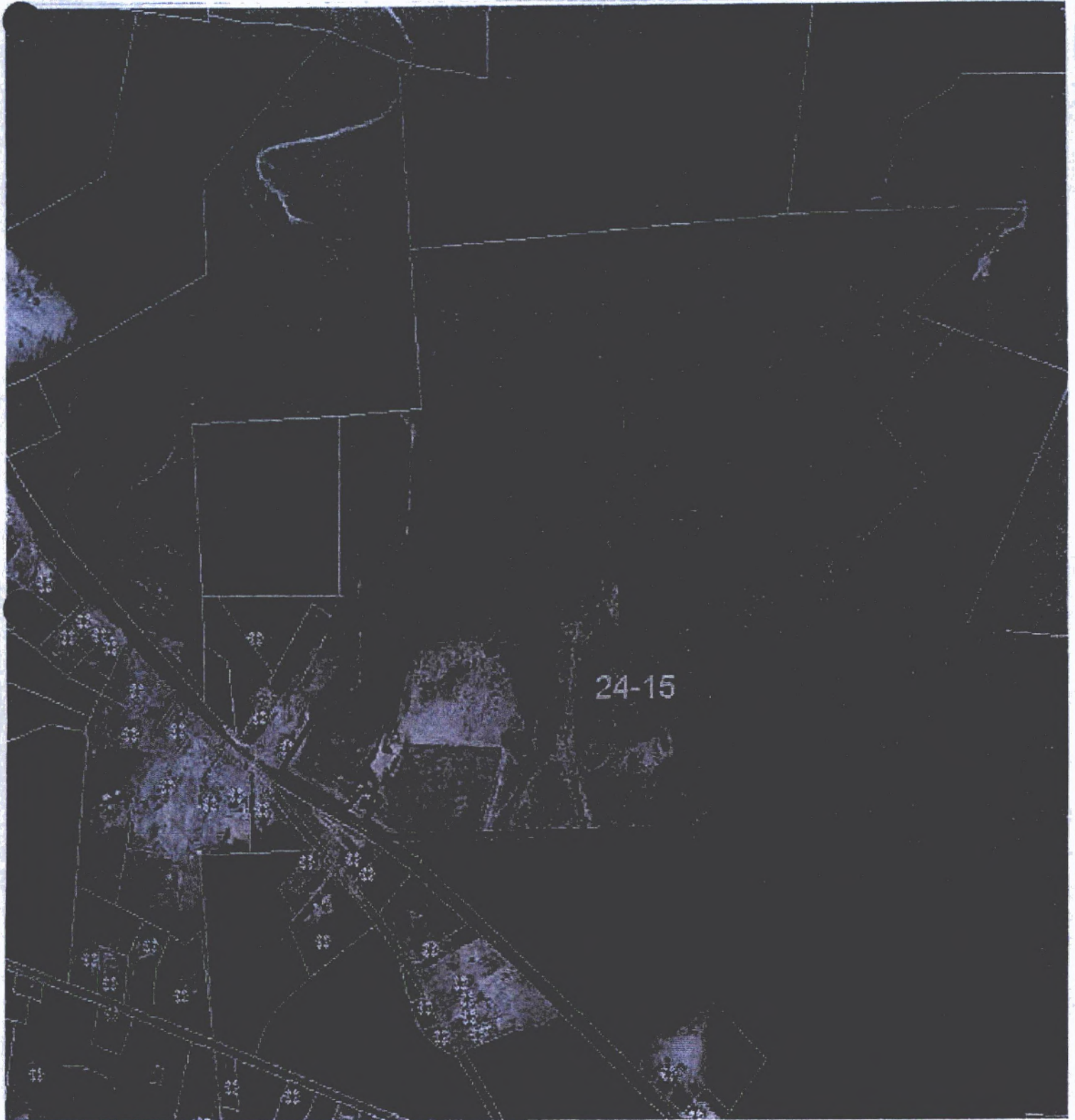
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tax Map ID 24-15



Scale: 1:18055.954822

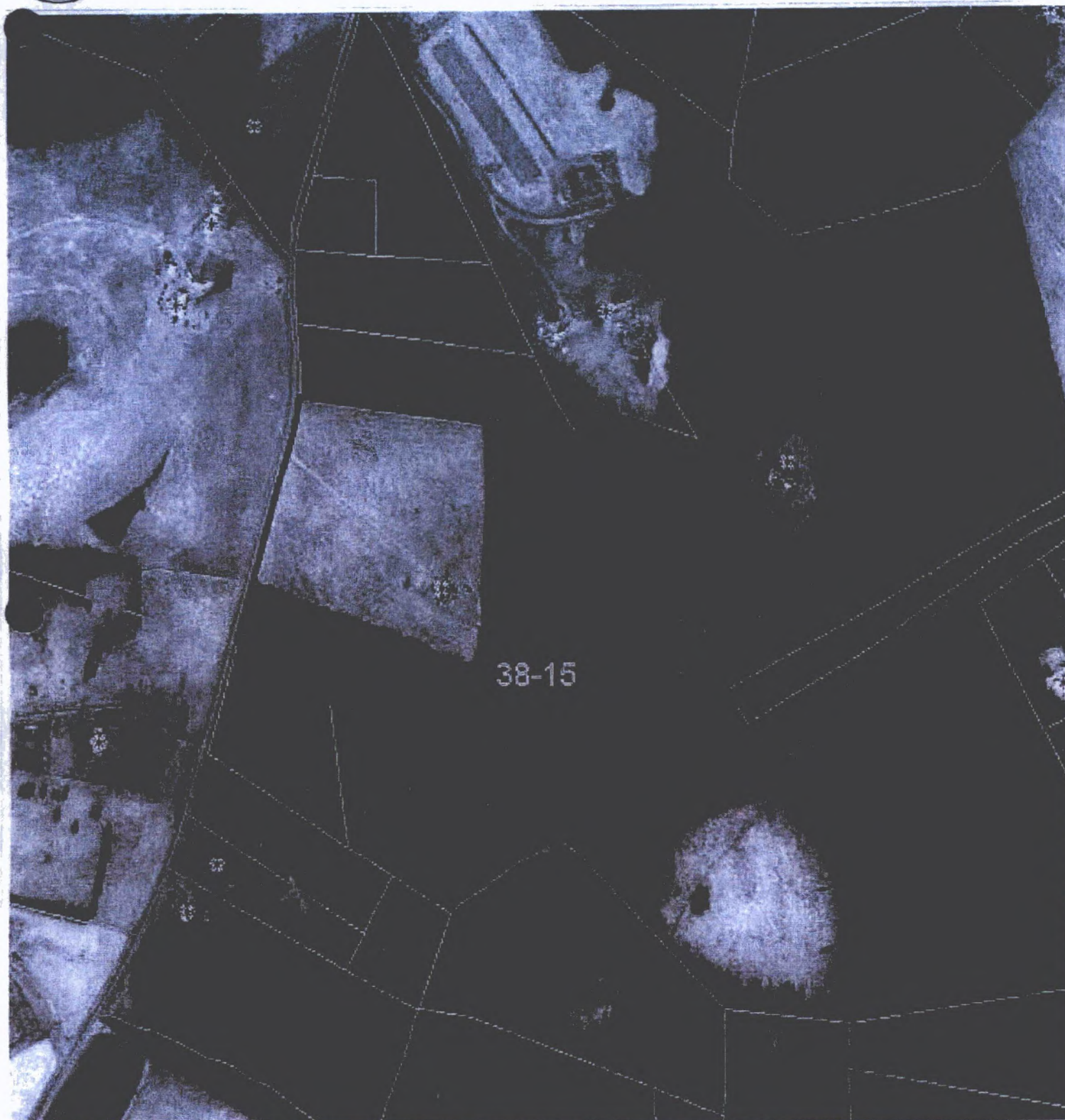
Date: 05/17/2012

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Tax Map ID 38-15



38-15

Scale: 1:9027.977411

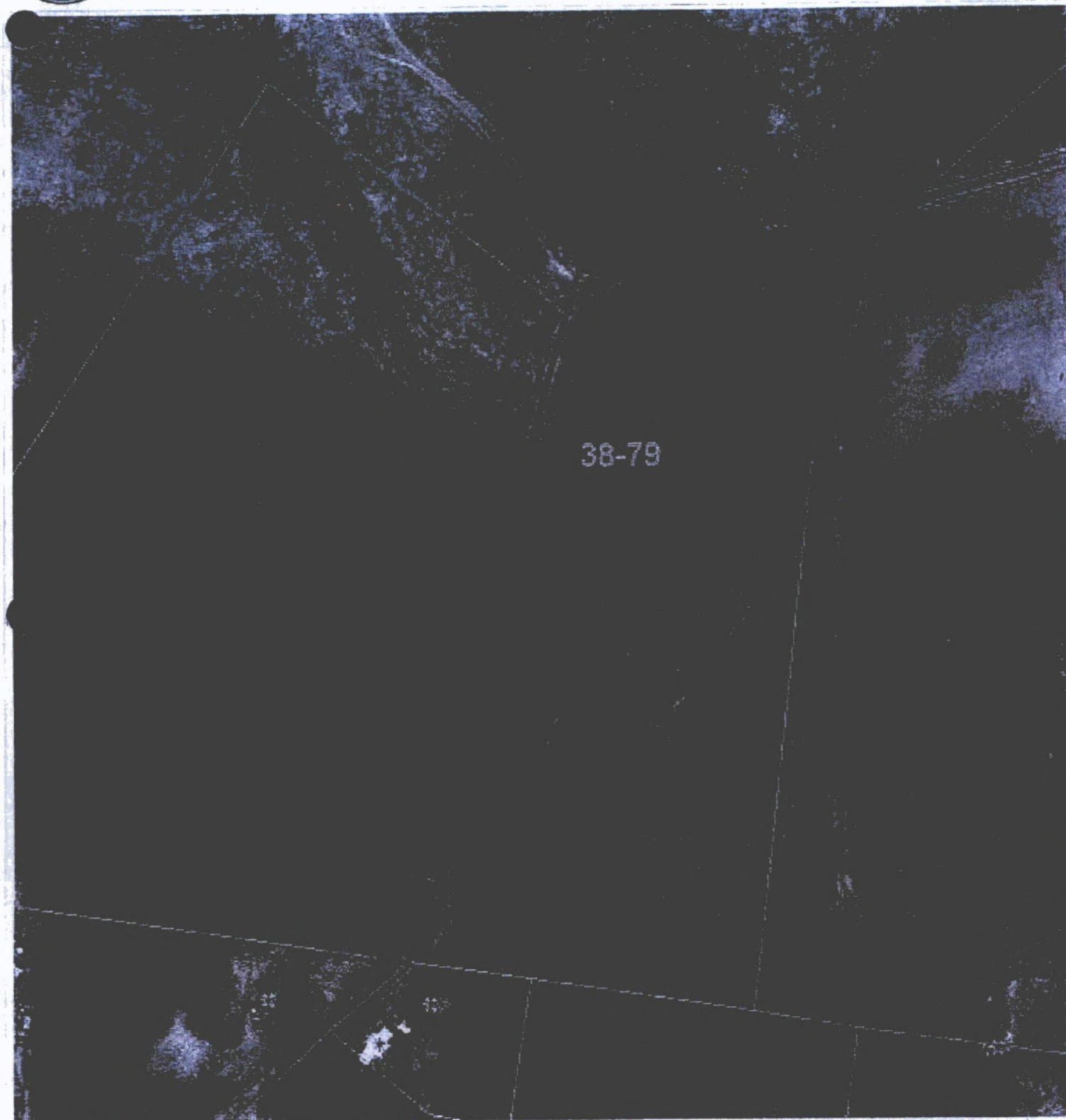
Date: 05/17/2012

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Tax Map ID 38-79



Scale: 1:4513.988705

Date: 06/04/2012

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Tax Map ID 39-59



Scale: 1:9027.977411

Date: 05/17/2012

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Tas Map ID 53-12-4



Scale: 1:18055.954822

Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tas Map ID 52-91



52-91

Scale: 1:36111.909643

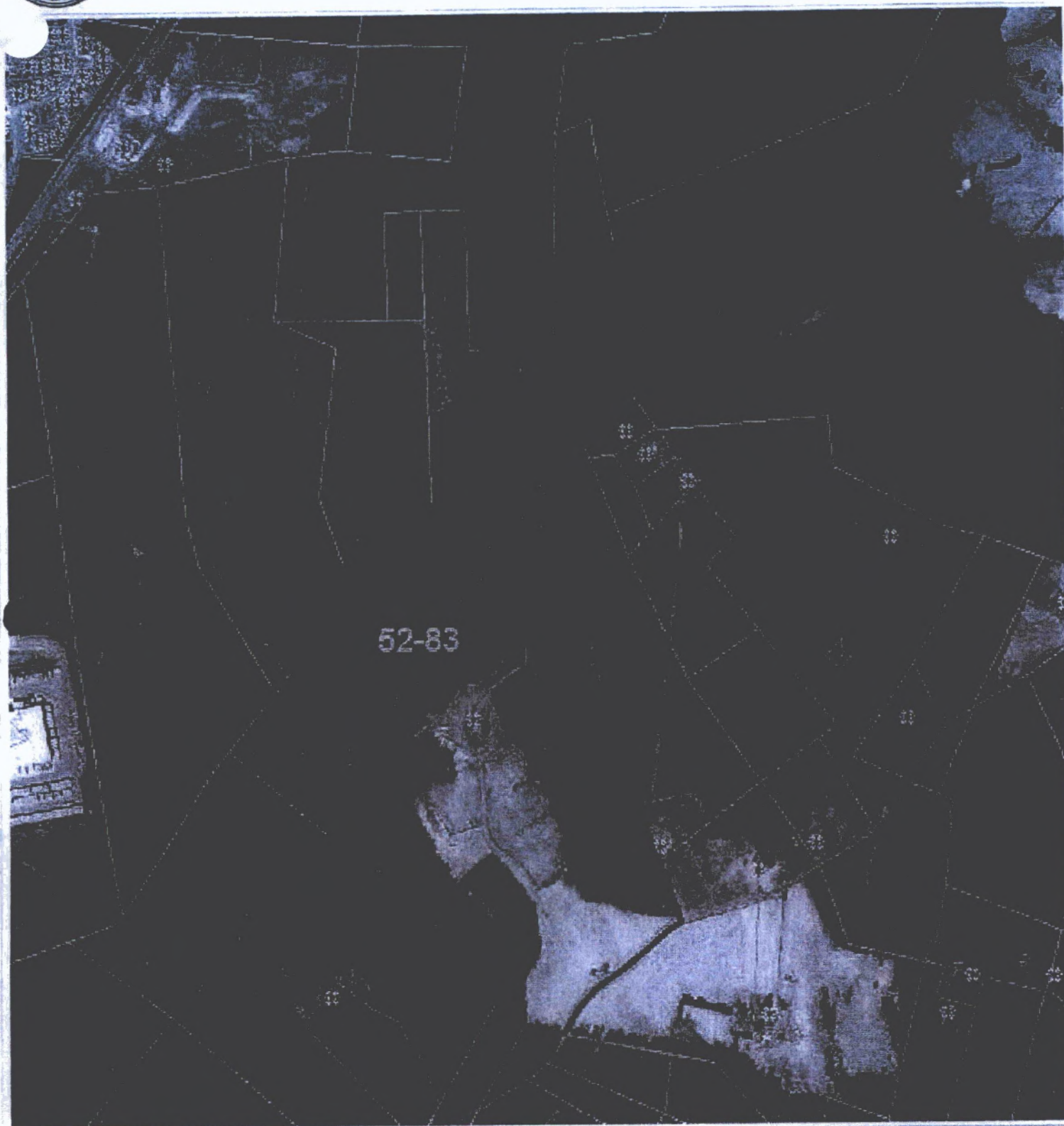
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tas Map ID 52-83



Scale: 1:18055.954822

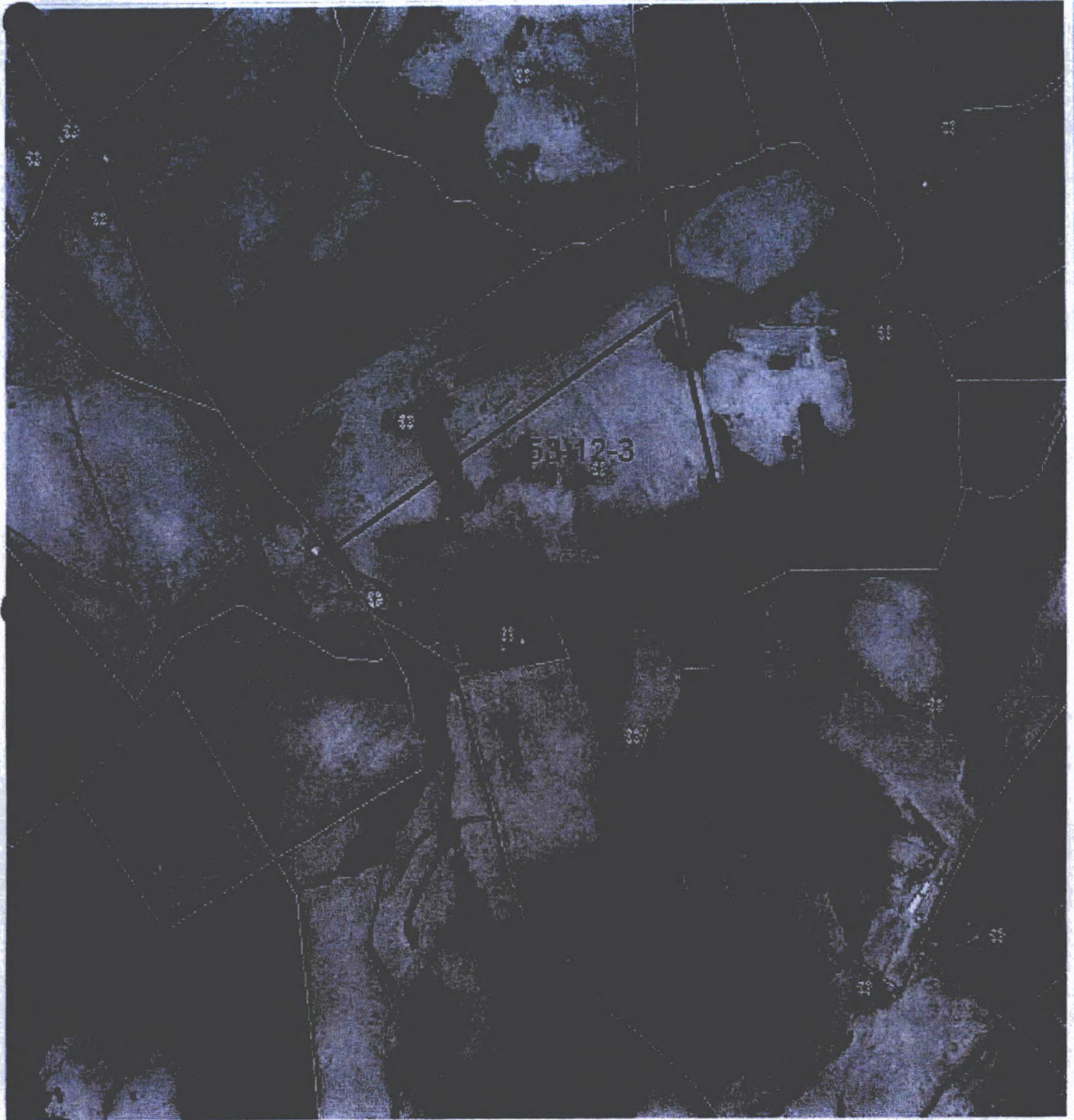
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tas Map ID 53-12-3



Scale: 1:18055.954822

Date: 05/17/2012

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Tax Map ID 38-51



Scale: 1:18055.954822

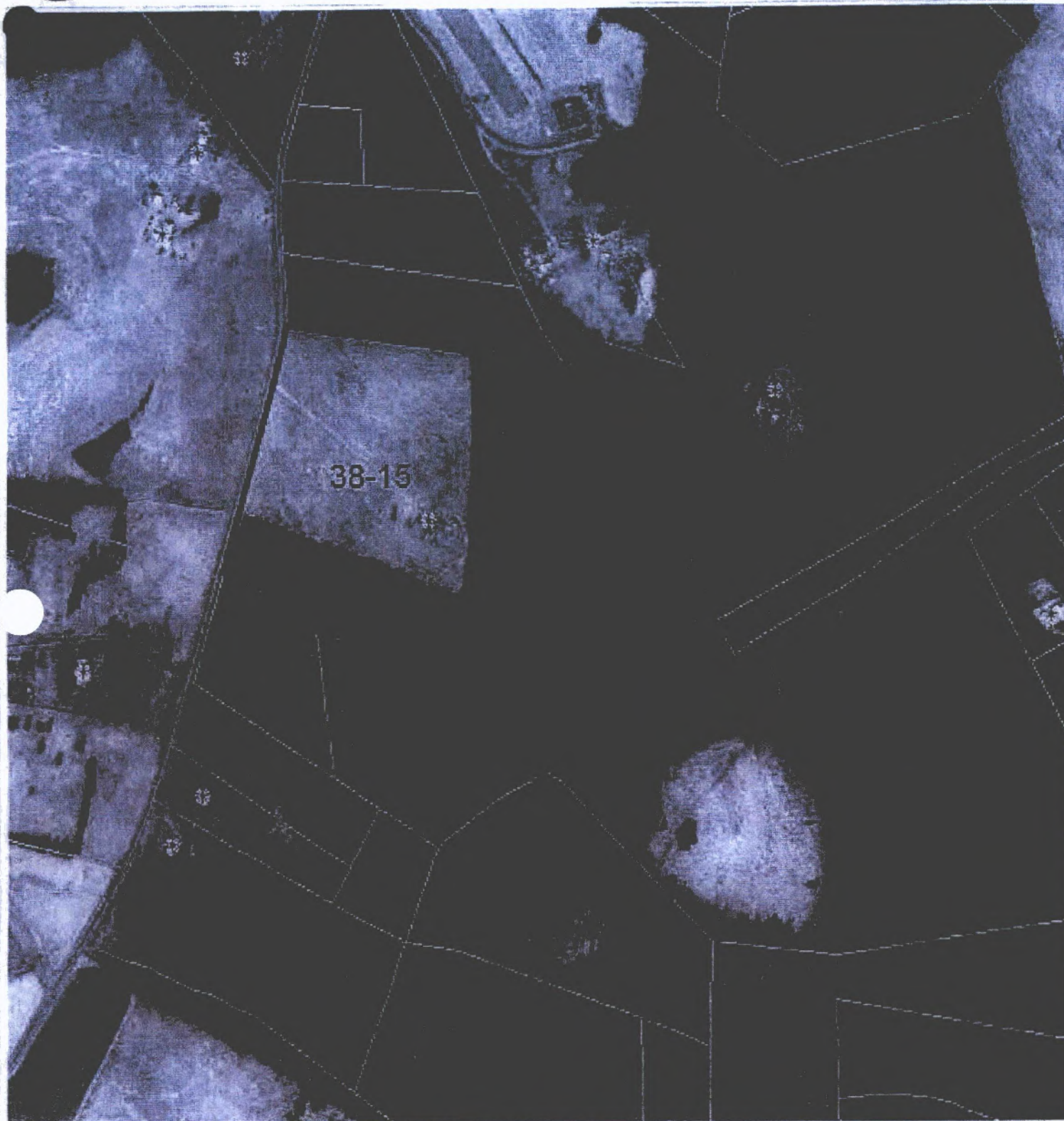
Date: 05/17/2012

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Tax Map ID 38-15



Scale: 1:9027.977411

Date: 06/04/2012

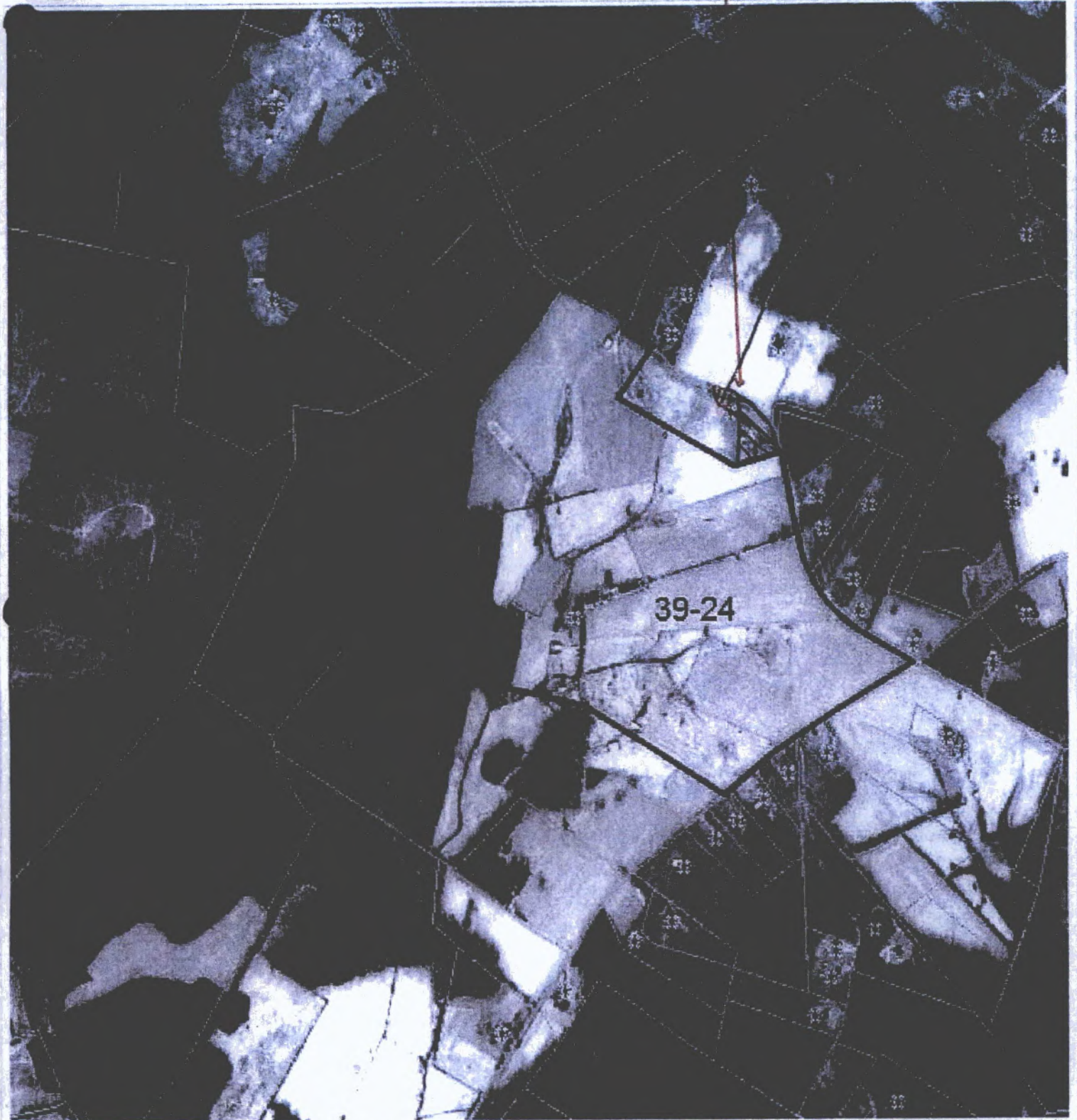
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Tax Map ID 39-24

200-ft Buffer



Scale: 1:18055.954822

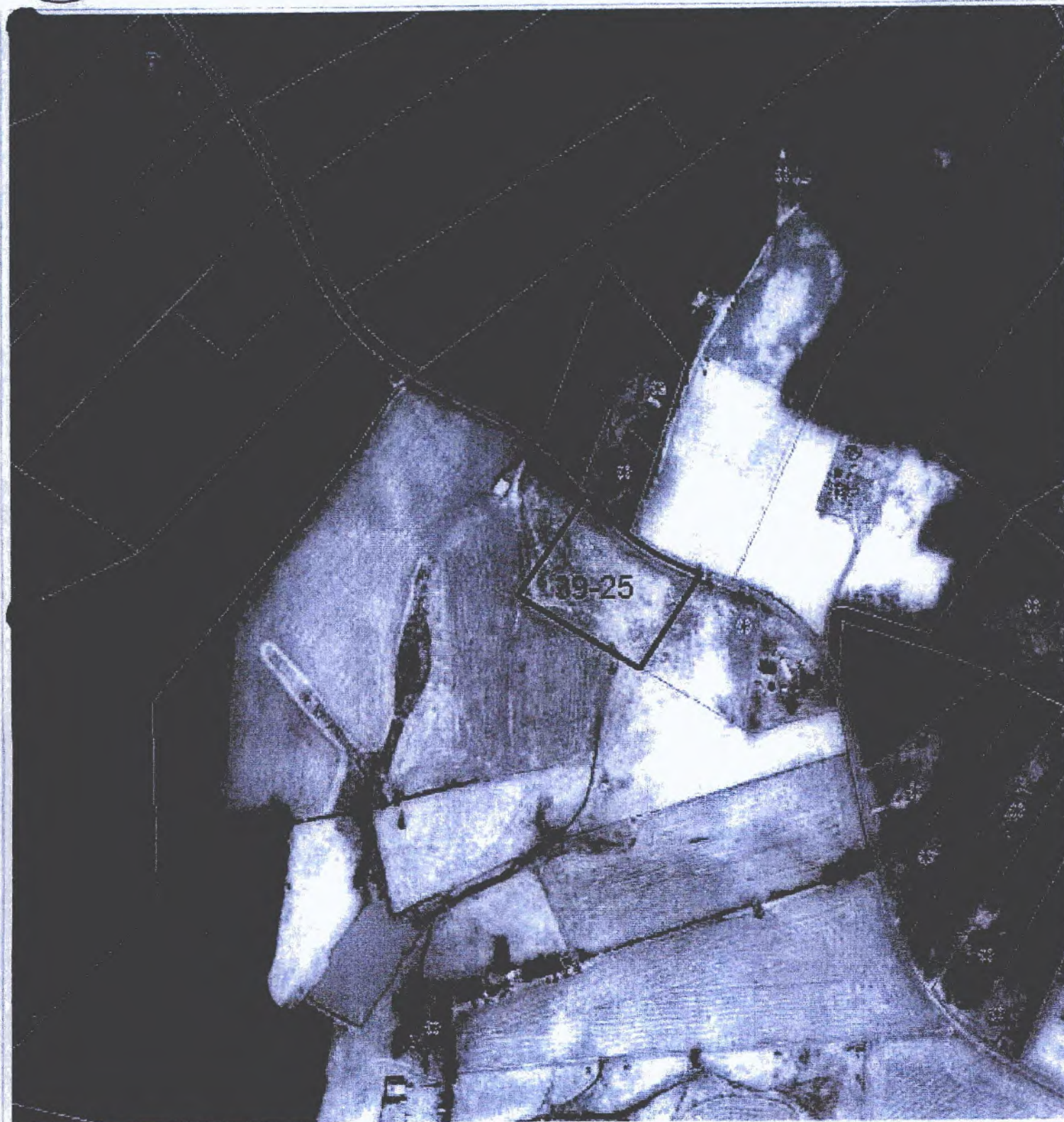
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tax Map ID 39-25



Scale: 1:9027.977411

Date: 05/17/2012

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Tax Map ID 39-22



39-22

Scale: 1:9027.977411

Date: 05/17/2012

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Tax Map ID 39-21



Scale: 1:4513.988705

Date: 05/17/2012

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Tax Map ID 39-21A



Scale: 1:4513.988705

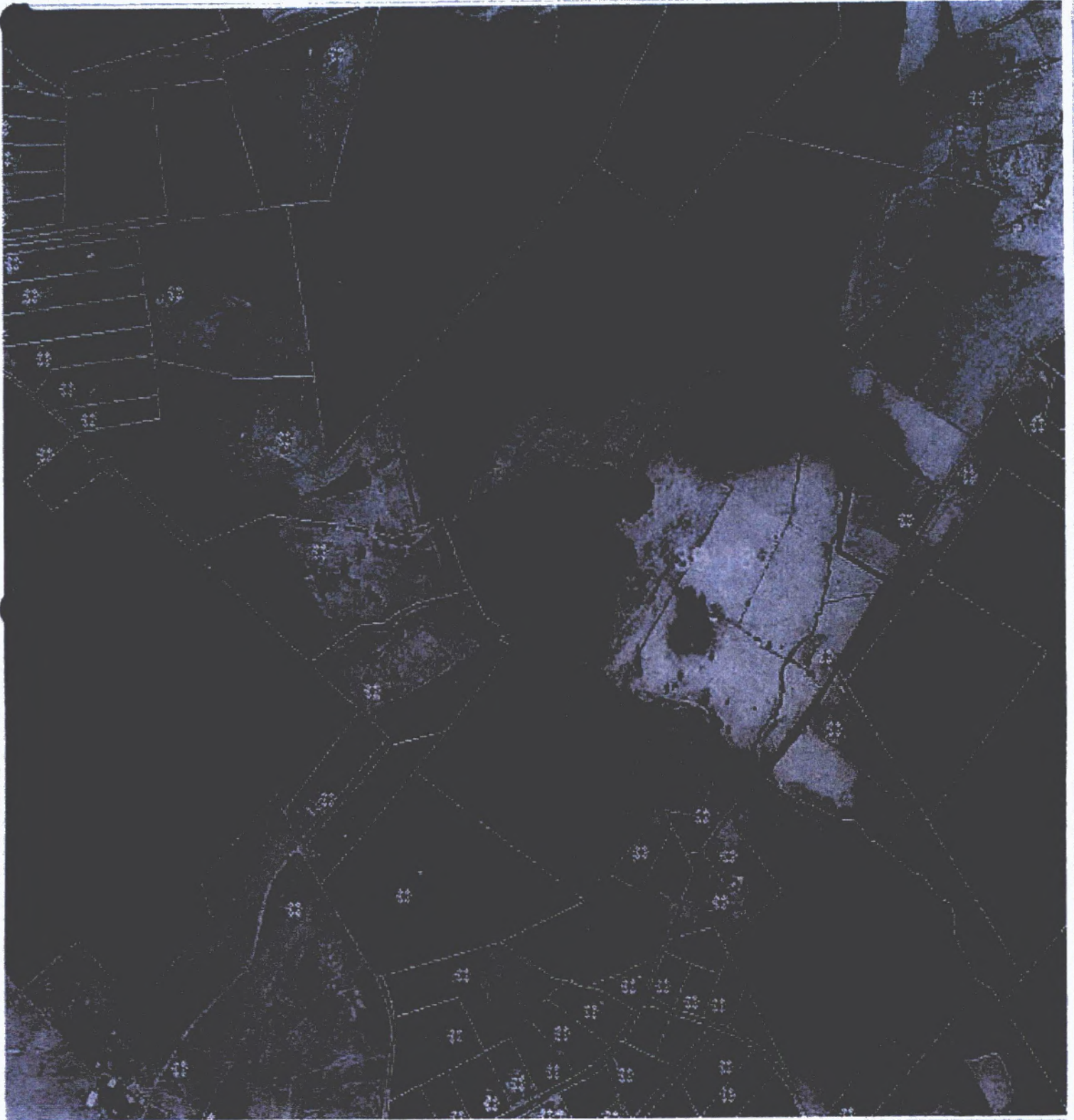
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tax Map ID 39-18



Scale: 1:18055.954822

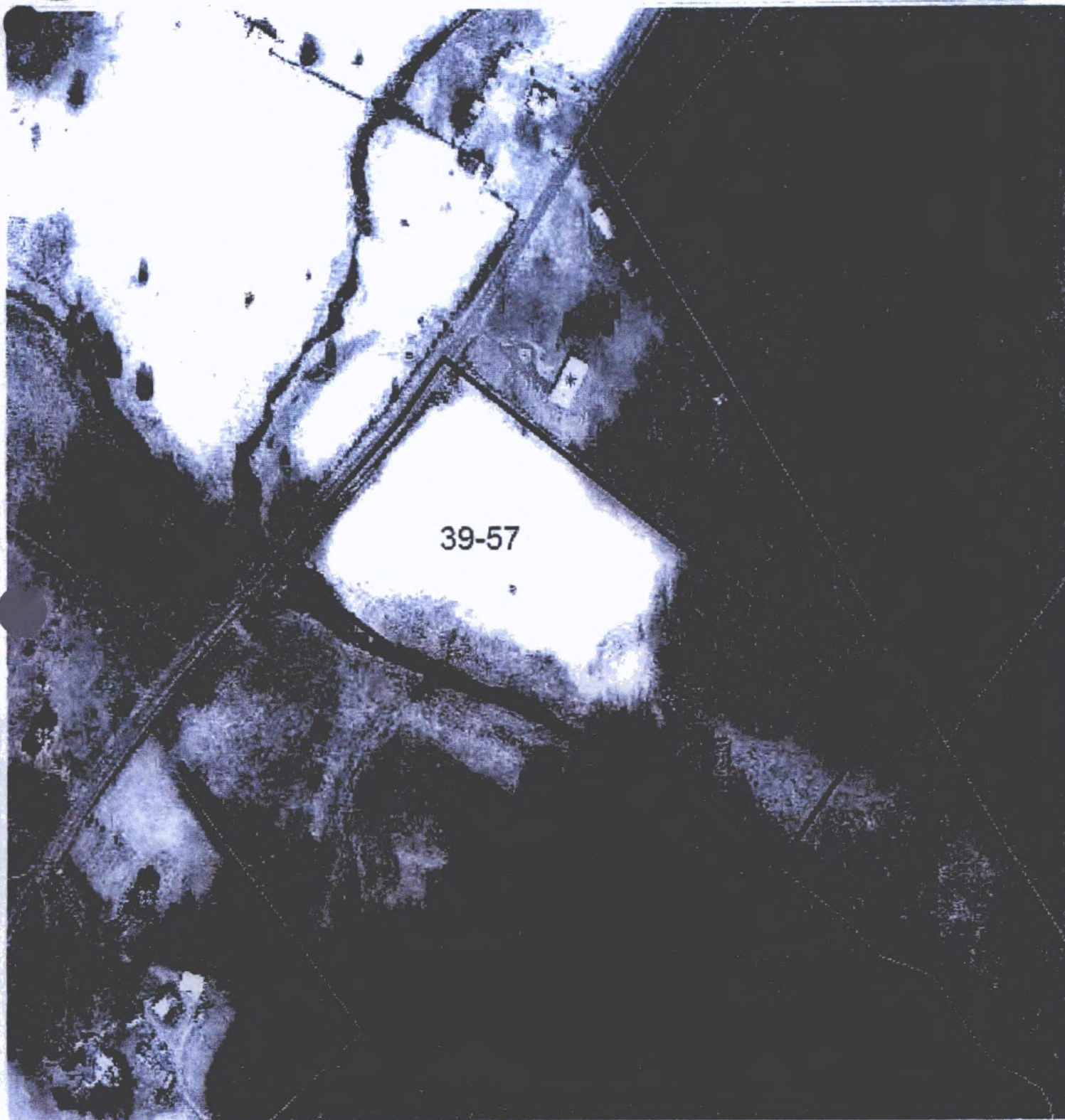
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tax Map ID 39-57



Scale: 1:4513.988705

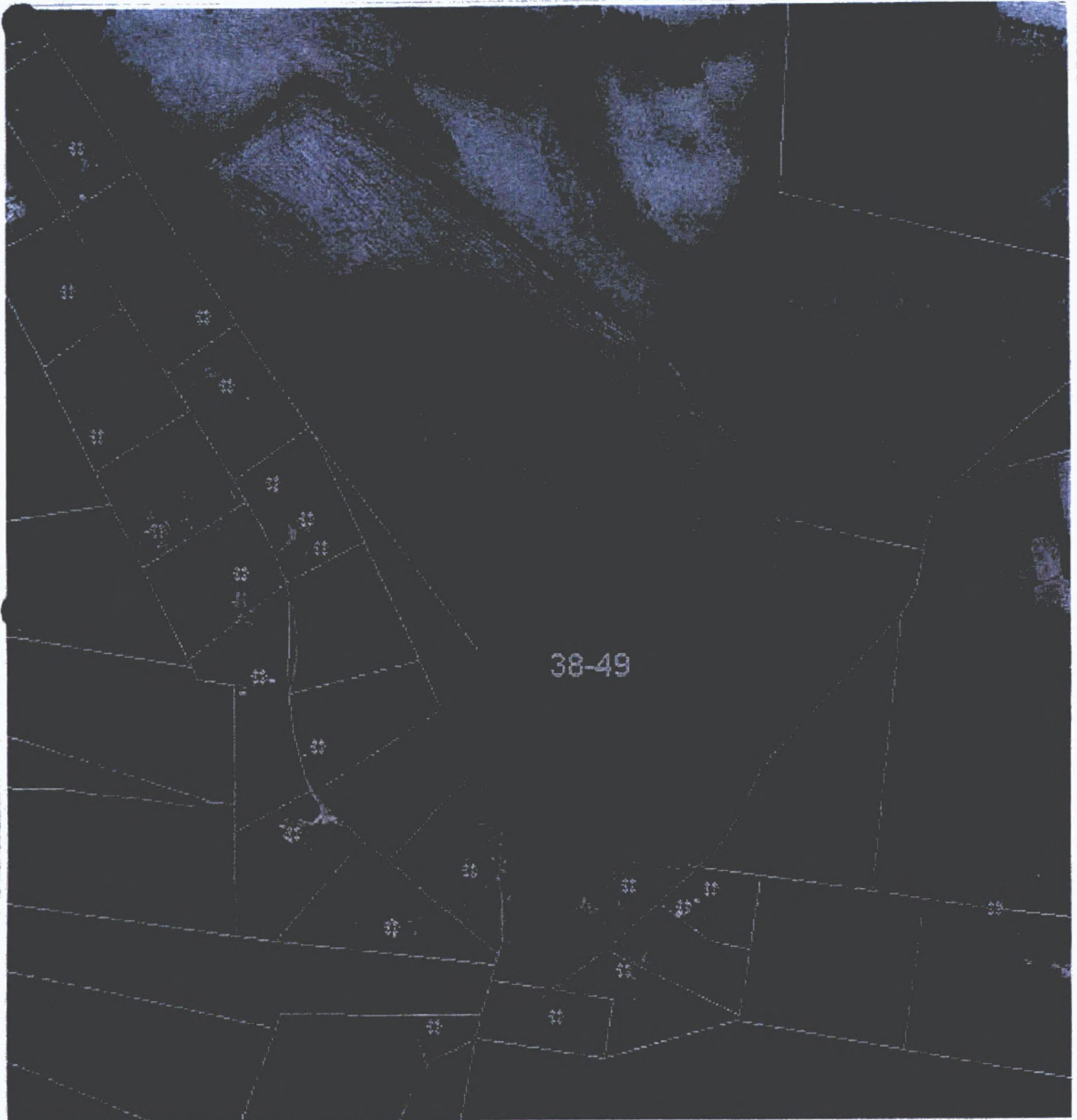
Date: 05/17/2012

Printed By: Carolanne Whiteside

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Tax Map ID 38-49



Scale: 1:9027.977411

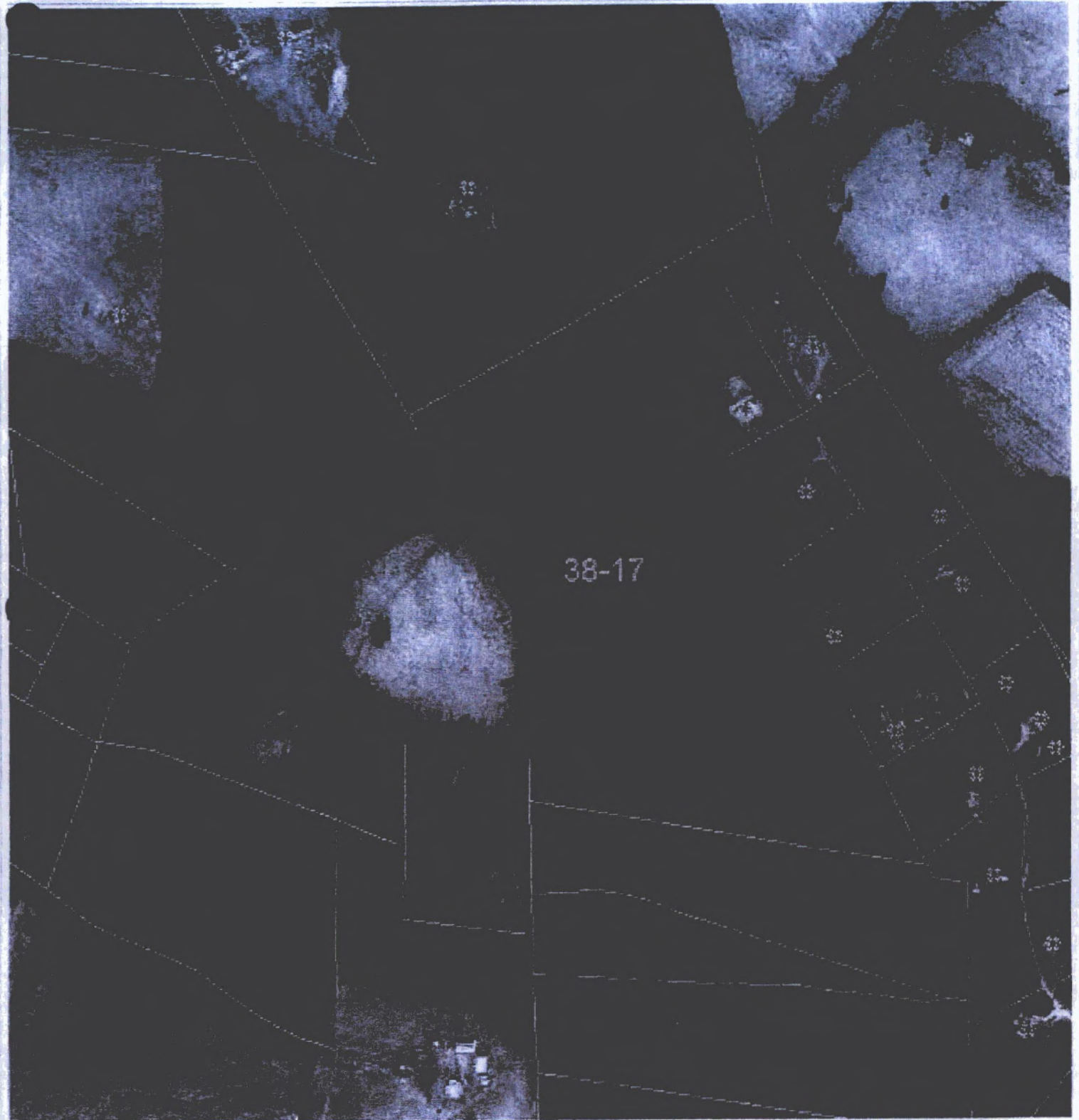
Date: 05/17/2012

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Tax Map ID 38-17



Scale: 1:9027.977411

Date: 05/17/2012

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Field	Map Unit	Acres	Percentage	Soil Series	High Water	Flood	Environmental Sensitive
34-01	CIB	6.7	26	Colfax	Nov - June		
34-01	PxC	5.7	22				
34-01	MvC3	5.0	20				
34-01	AnB2	4.0	16				
34-01	IdC2	2.7	10	Iredel	Dec - April		
34-01	ZoB2	1.4	6				
34-02	WoB	8.0	22	Worsham	Nov - May		
34-02	We	6.8	18	Wehadkee	Nov - May	Nov - June	
34-02	PxC3	6.3	17				
34-02	Ch	5.8	15	Chewacla	Nov - April	Nov - April	
34-02	CIB	5.3	14	Colfax	Nov - June		
34-02	FrB	5.2	14	Fork	Oct - May	Oct - May	
34-03	IdB2	11.0	55	Iredel	Dec - April		
34-03	CcB2	3.2	16				
34-03	MuB2	2.9	14				
34-03	IrB	1.7	8	Iredel	Dec - April		
34-03	ZoB2	1.4	7				
34-04	CcB2	7.5	49				
34-04	ZoB2	4.1	27				
34-04	MuB2	2.6	17				
34-04	CfC3	1.1	7				
34-05	CfC3	11.4	30				
34-05	WH	11.1	29	Wehad-	Nov - May	Nov - June	
34-05	IdC2	7.6	20	Iredel	Dec - April		
34-05	Pc03	4.8	13				
34-05	TmC3	3.0	8				
34-06	TmC3	22.0	77				
34-06	TaB2	4.4	15				
34-06	AbB	2.3	8				
34-07	TmC3	16.4	62				
34-07	TaB2	4.0	15				
34-07	TmB3	3.7	14				
34-07	NoC2	2.6	9				

Field	Map Unit	Acres	Percentage	Soil Series	High Water Flood	Environmental Sensitive
34-08	TaB2	4.3	45			
34-08	TmC3	3.9	41			
34-08	TaC2	1.3	14			
34-19	Eb	9.6	60	Elbert	Nov-May	
34-19	ZoC2	3.3	21			
34-19	SeC	3.0	19	Sekil		Leaching
34-20	AIB	4.3	30			
34-20	FIC2	4.3	30			
34-20	ZoB	2.9	20			
34-20	Ts	1.7	12			
34-20	SeC	1.1	8	Sekil		Leaching
34-22	FIB2	6.7	49			
34-22	FIC2	3.6	26			
34-22	SeC	2.2	16	Sekil		Leaching
34-22	TmC3	1.2	9			
34-23	TmC3	10.4	49			
34-23	TmB3	5.9	28			
34-23	TaB2	2.5	12			
34-23	TaC2	2.5	11			
34-24	FIB2	10.5	25			
34-24	SeC	9.8	24	Sekil		Leaching
34-24	SeB	0.1	20	Sekil		Leaching
34-24	MdC3	4.2	10			
34-24	WoB	3.2	8	Worsham	Nov-May	
34-24	CIB	2.8	7	Colfax	Nov-June	
34-24	TmB3	2.3	6			
34-25	FIB2	2.8	39			
34-25	TaC2	2.2	31			
34-25	SeC	0.8	11	Sekil		Leaching
34-25	TmC3	0.7	10			
34-25	FIC2	0.7	9			

Field	Map Unit	Acres	Percentage	Soil Series	High Water Flood	Environmental Sensitive
34-26	SeC	19.4	46	Sekil		Leaching
34-26	TmC3	10.2	24			
34-26	SeB	9.9	23	Sekil		Leaching
34-26	Id82	3.1	7	Iredell	Dec-April	
34-27	TmB3	10.2	35			
34-27	TaB2	8.8	31			
34-27	TmC3	8.1	28			
34-27	TaC2	1.7	6			
34-33	ZoB2	20.3	48			
34-33	Co	10.7	26			
34-33	ZoC2	4.4	10			
34-33	CwC3	3.2	8			
34-33	FIC2	3.4	8			
34-43	SeB	8.2	39	Sekil		Leaching
34-43	An82	6.6	31			
34-43	IdB	4.3	21	Iredell	Dec-April	
34-43	FIB2	1.9	9			
34-44	TmC3	4.7	63			
34-44	WoB	1.9	26	Worsham	Nov-May	
34-44	TaB2	0.8	11			
34-45	No82	3.9	52			
34-45	TaB2	1.7	22			
34-45	WoB	1.4	19	Worsham	Nov-May	
34-45	NoC2	0.6	7			
34-51	TaB2	12.9	44			
34-51	NoB2	5.5	18			
34-51	NoG2	5.4	18			
34-51	TaG2	4.1	14			
34-51	RoB	1.8	6			

Field	Map Unit	Acres	Percentage	Soil Series	High Water Flood	Environmental Sensitive
34-52	NoG2	3.5	42			
34-52	TmB3	2.3	27			
34-52	TaB2	1.8	22			
34-52	RoB	0.8	9			
34-53	NoG2	4.0	32			
34-53	TaB2	4.1	32			
34-53	NoB2	3.0	23			
34-53	TmG3	1.6	13			
34-54	TaB2	7.2	58			
34-54	NoB2	3.7	30			
34-54	NoG2	1.5	12			
34-55	TaB2	13.2	55			
34-55	NoG2	4.7	20			
34-55	RoB	3.0	13			
34-55	NoB2	2.8	12			
34-56	TaB2	10.1	50			
34-56	NoG2	7.1	35			
34-56	NoB2	3.1	15			
34-57	TaB2	4.9	48			
34-57	NoB2	2.6	26			
34-57	NoG2	1.3	13			
34-57	TmB3	1.3	13			
34-58	NoG2	6.0	59			
34-58	RoB	2.2	21			
34-58	TaB2	1.2	12			
34-58	GO	0.8	8			
34-59	TmG3	2.4	33			
34-59	NoB2	1.9	26			
34-59	NoG2	1.7	23			
34-59	TaB2	1.3	18			

Field	Map Unit	Acres	Percentage	Soil Series	High Water	Flood	Environmental Sensitive
34-60	TmG3	4.5	29	Madison			
34-60	NoB2	2.3	15				
34-60	NoG2	2.2	14				
34-60	TaG2	1.8	12				
34-60	TaB2	1.4	9				
34-60	MoC	1.3	8				Shallow
34-60	NsG3	1.3	8				
34-60	GO	0.8	5				
34-61	TaB2	8.5	73				
34-61	TmC3	1.7	14				
34-61	No82	1.5	13				
34-62	NoC2	8.8	51	Madison			
34-62	Ta82	7.2	42				
34-62	MnC	1.2	7				Shallow
34-63	MnC	5.8	51	Madison			Shallow
34-63	co	1.7	15				
34-63	NoC2	1.3	11				
34-63	Ta82	1.0	9	Madison			
34-63	Moc	0.9	8				Shallow
34-63	TaC2	0.7	6				
34-64	MnC	5.0	49	Madison			Shallow
34-64	NoC2	3.4	33				
34-64	WH	1.0	10	Wehadkee-Cheacla	Nov-May	Nov-June	
34-64	TaB2	0.8	8				
34-65	Ta82	3.0	50				
34-65	No82	1.5	25				
34-65	TaC2	1.5	25				
34-66	No82	14.3	58	Lignum			
34-66	Ta82	4.4	18				
34-66	NoC2	3.6	15				
34-66	LgB	2.1	9		Dec-May		

Field	Map Unit	Acres	Percentage	Soil Series	High Water Flood	Environmental Sensitive
34-67	NoC2	6.9	40			
34-67	NoB2	6.1	36			
34-67	Ta82	4.1	24			
34-68	NoC2	15.1	64			
34-68	No82	8.4	36			
34-69	No82	12.6	95			
34-69	NoC2	0.6	5			
34-70	TmC3	17.0	56			
34-70	Ta82	13.2	44			
34-71	Ta82	11.4	86			
34-71	NoC2	1.8	14			
34-72	No82	10.6	50			
34-72	TaC2	6.1	28			
34-72	NoC2	2.3	11			
34-72	TaB2	2.4	11			
34-73	TaB2	9.9	41			
34-73	TmC3	7.4	31			
34-73	SeC	5.2	22	Sekil		Leaching
34-73	NoC2	1.5	6			

ENVIRONMENTALLY SENSITIVE AREAS

Field	Reason for Sensitive Area
34-01	High Water Table (Map Unit Clb, IdC2 - 36%)
34-02	High Water Table (Map Unit - Ch, ClB, FrB, We, WoB - 83%) Flooded Soils (Map Unit Ch, FrB, We - 47%)
34-03	High Water Table (Map Unit IdB2, IrB - 63%)
34-04	None
34-05	High Water Table (Map Unit IdB2, IrB - 63%) Flooded Soils (Map Units WH - 29%)
34-06	None
34-07	None
34-08	None
34-19	High Water Table (Map Units Eb - 60%) Leaching Potential (Map Unit SeC - 19%)
34-20	Leaching Potential (Map Unit SeC - 8%)
34-23	None
34-24	High Water Table (Map Units ClB, WoB - 15%) Leaching Potential (Map Units SeB, SeC - 44%)
34-25	Leaching Potential (Map Unit SeC - 46%)
34-26	High Water Table (Map Unit IdB2 - 7%) Leaching Potential (Map Units SeB, SeC - 69%)
34-27	None
34-33	None
34-43	High Water Table (Map Unit IdB - 21%) Leaching Potential (Map Unit SeB - 39%)

ENVIRONMENTALLY SENSITIVE AREAS

Field	Reason for Sensitive Area
34-44	High Water Table (Map Unit WoB - 26%)
34-45	High Water Table (Map Unit WoB - 19%)
34-51	None
34-52	None
34-53	None
34-54	None
34-55	None
34-56	None
34-57	None
34-58	None
34-59	None
34-60	Shallow Soils (Map Unit MoC - 8%)
34-61	None
34-62	Shallow Soils (Map Unit MnC - 7%)
34-63	Shallow Soils (Map Unit MnC - 51%)
34-64	High Water Table (Map Unit WH - 10%) Flooded Soils (Map Unit WH - 10%) Shallow Soils (Map Unit MnC - 49%)
34-65	None
34-66	High Water Table (Map Unit LgB - 9%)
34-67	None
34-68	None
34-69	None

ENVIRONMENTALLY SENSITIVE AREAS

Field	Reason for Sensitive Area
34-70	None
34-71	None
34-72	None
34-73	Leaching Potential (Map Unit SeC - 22%)

Louisa County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
AsB, AsC, AsD	Ashlar			Leaching
AsC3, AsD3	Ashlar			Leaching
AV	Ashlar			Leaching
Ch	Chewacla	Nov – April	Nov – April	
CIB	Colfax	Nov – June		
Eb	Elbert	Nov – May		
FN	Fluvaquents	Nov – April	Nov – April	
Fo	Forestdale	Jan – April	Jan – April	
FrB	Fork	Oct – May	Oct – May	
IdB	Iredell	Dec – April		
IdB2, IdC2	Iredell	Dec – April		
IrA, IrB	Iredell	Dec – April		
Iv	Iredell	Dec – April		
LgB	Lignum	Dec – May		
MnB, MnC, MnD	Madison			Shallow
MoC, MoD	Madison			Shallow
SeB, SeC, SeD	Sekil			Leaching
SeC3	Sekil			Leaching
SP	Sekil			Leaching
To	Tocca		Jan – Dec	
Ts	Tocca		Jan – Dec	
We	Wehadkee	Nov – May	Nov – June	
WH	Wehadkee-Chewacla	Nov – May	Nov – June	
WoB	Worsham	Nov – May		

Map Legend



House/Dwelling with a well

- 200' buffer-dwelling (with conditions for reduction);
- 100' buffer-well



Rock Outcrop

- 25' buffer



Limestone Outcrop / Closed Sinkholes

- 50' buffer



Well

- 100' buffer



Lake/Pond

- 35' w/vegetative buffer; 100' without vegetative buffer



Slope which exceeds 15%



"PAS" - Publicly Accessible Site

- 200' buffer



Intermittent Stream

- 35' w/vegetative buffer; 100' without vegetative buffer



Stream/River

- 35' w/vegetative buffer; 100' without vegetative buffer



Agricultural/Drainage Ditch

- 10' buffer



Field Boundary

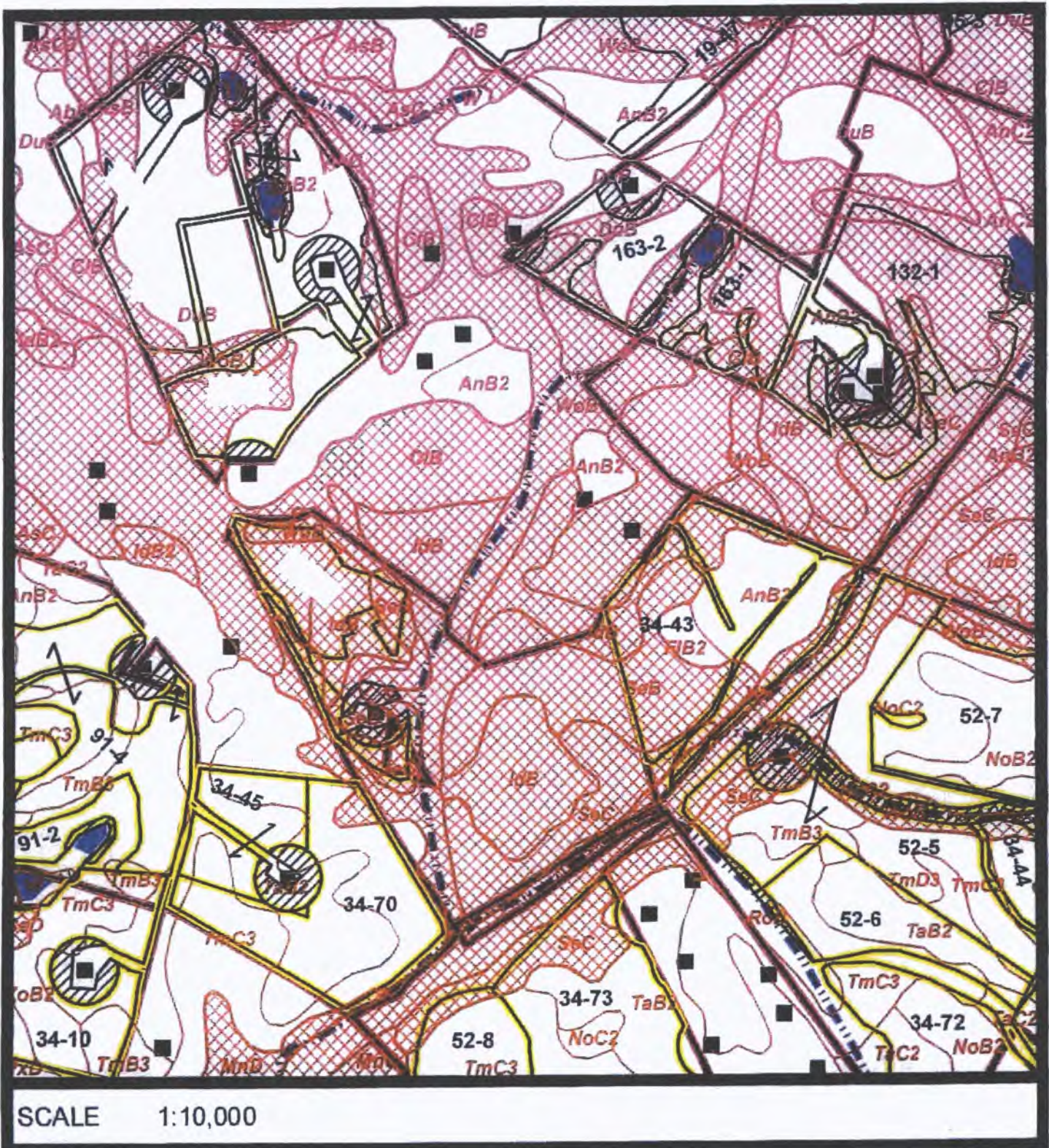


Property Line


- 100' buffer unless waiver issued



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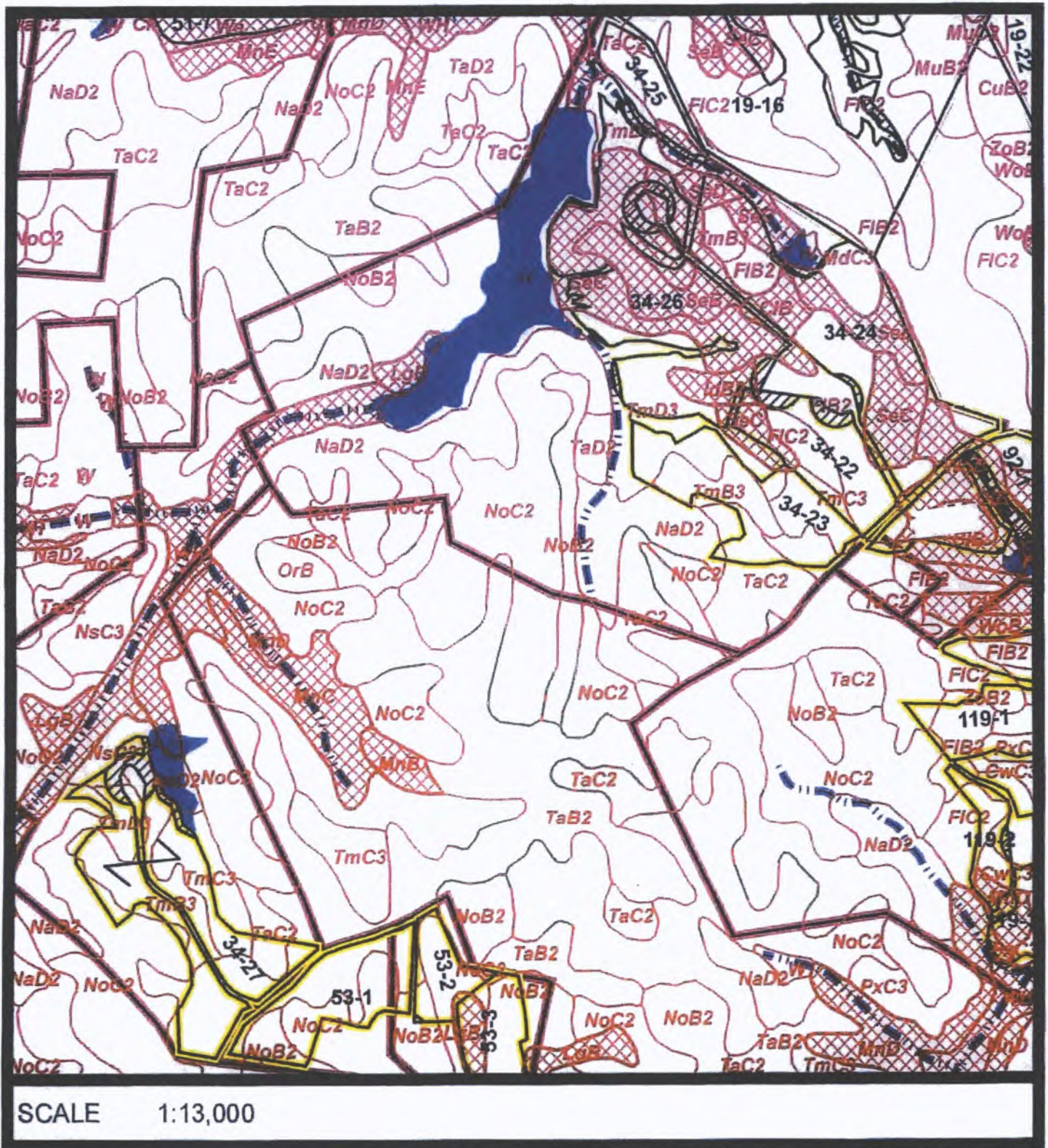


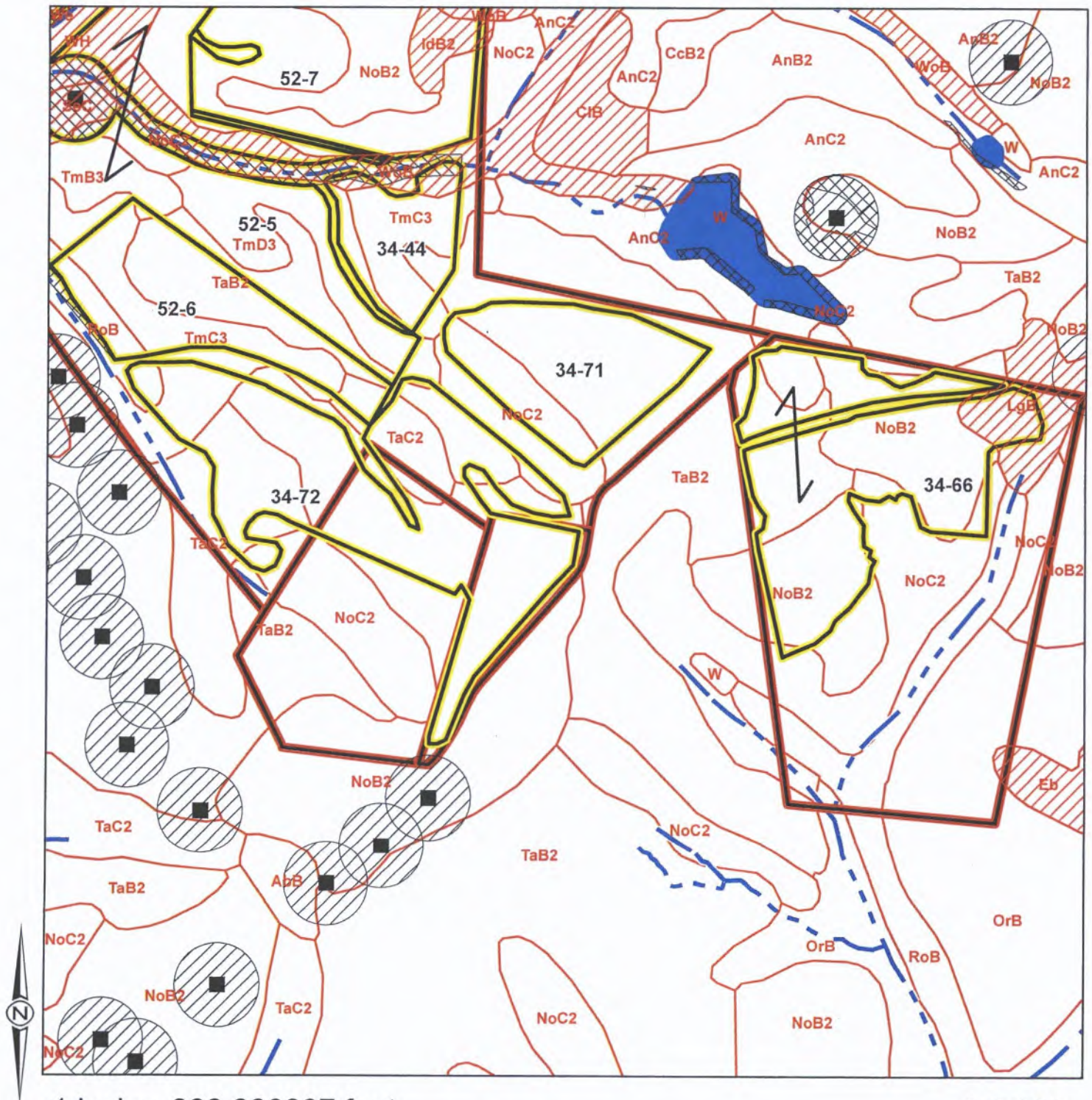
SOIL MAP

 Environmentally Sensitive Soil



 Environmentally Sensitive Soil





1 inch = 666.666667 feet

1:8,000

SOIL MAP

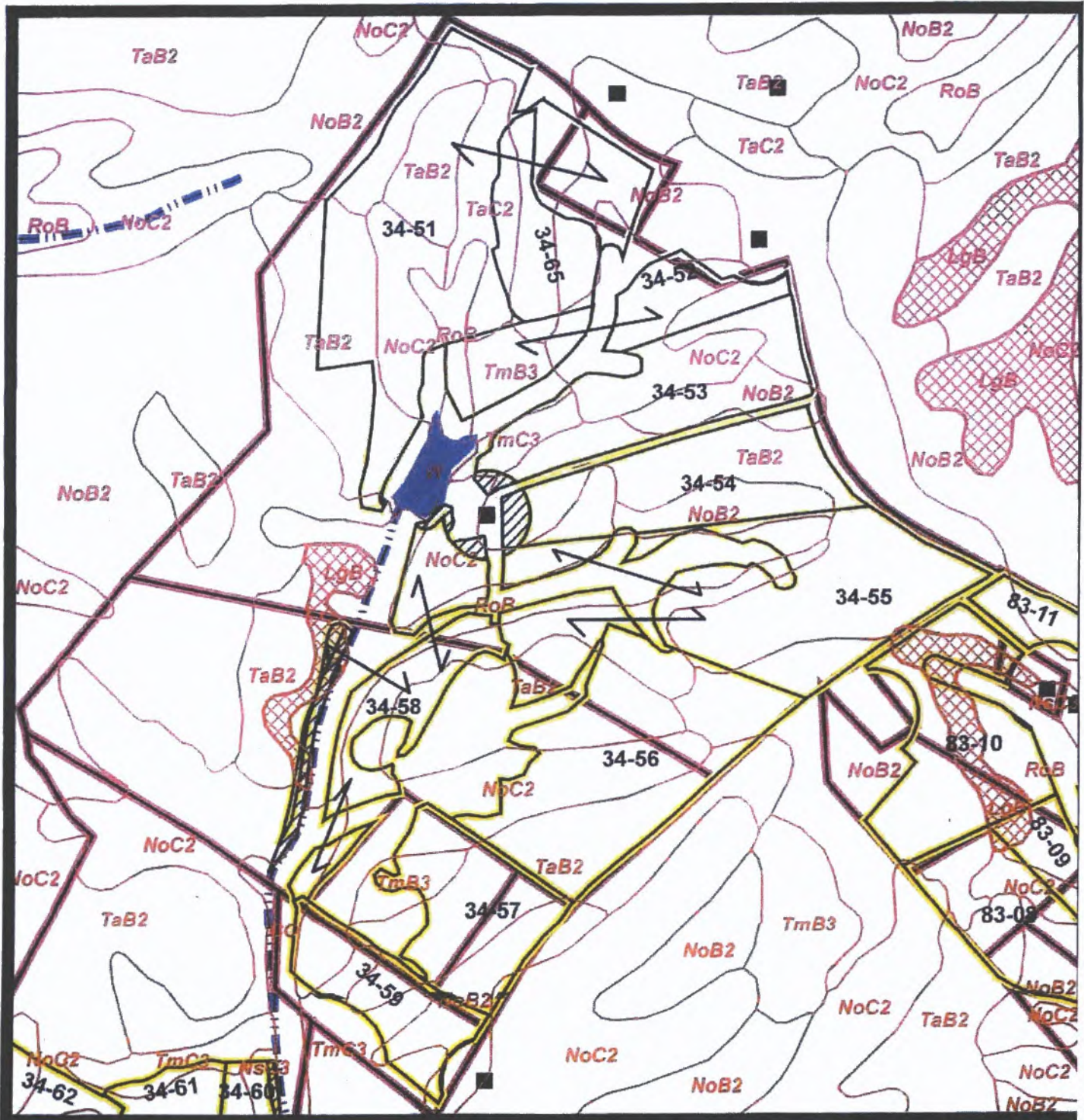
Revised 11-12-15



Environmentally Sensitive Soil



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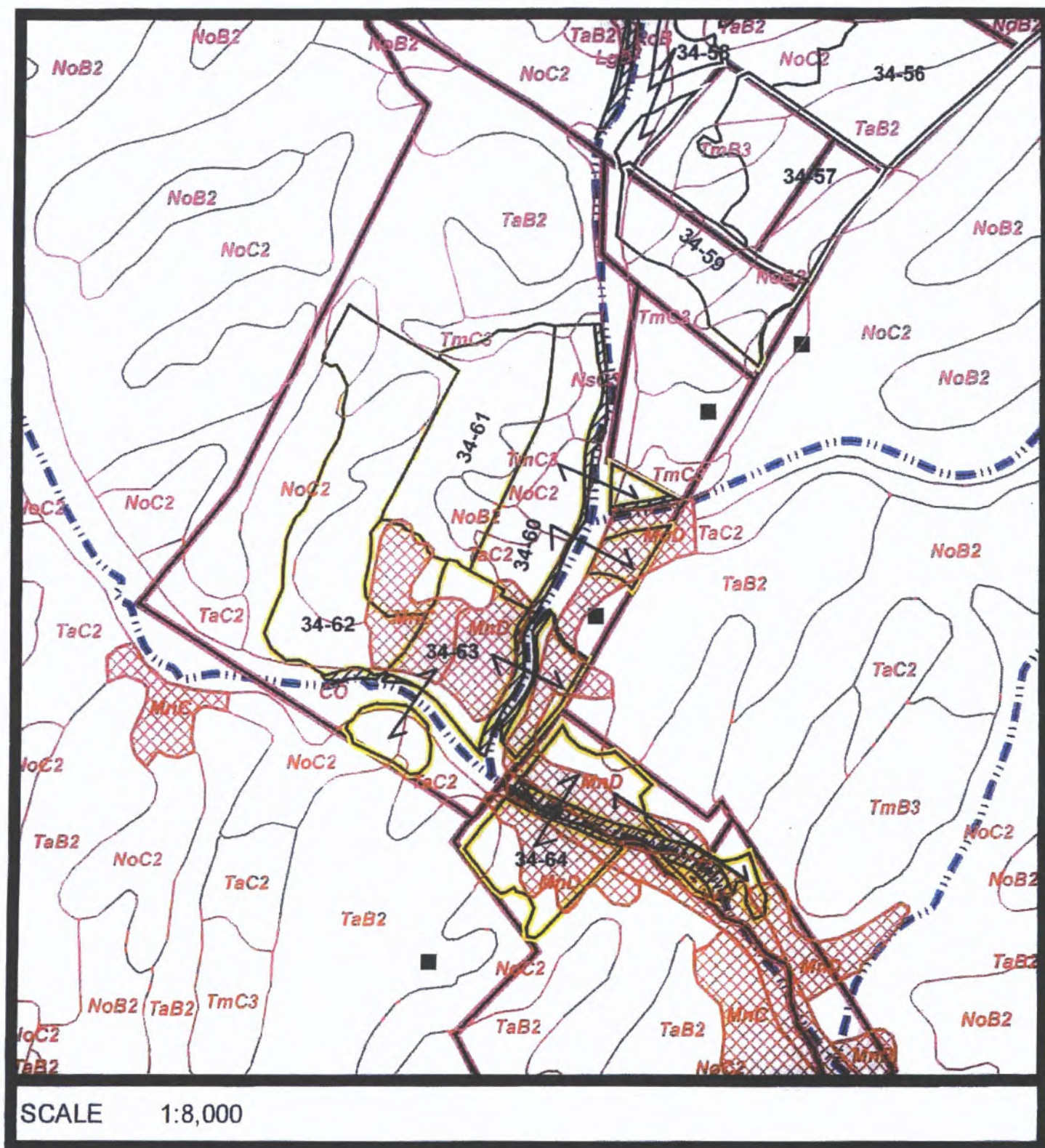


SCALE 1:8,000


SOIL MAP

 Environmentally Sensitive Soil

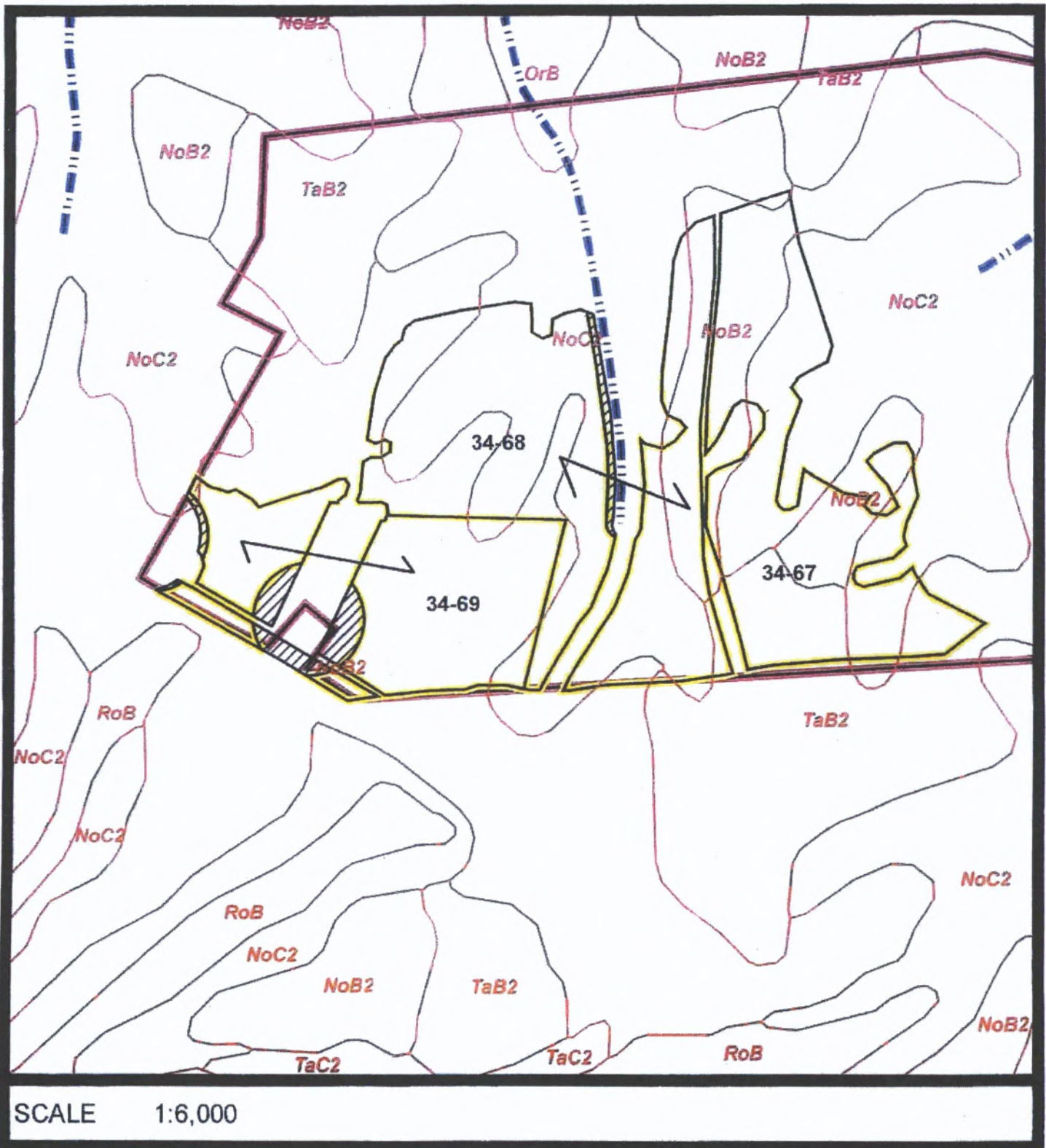




SOIL MAP

 Environmentally Sensitive Soil



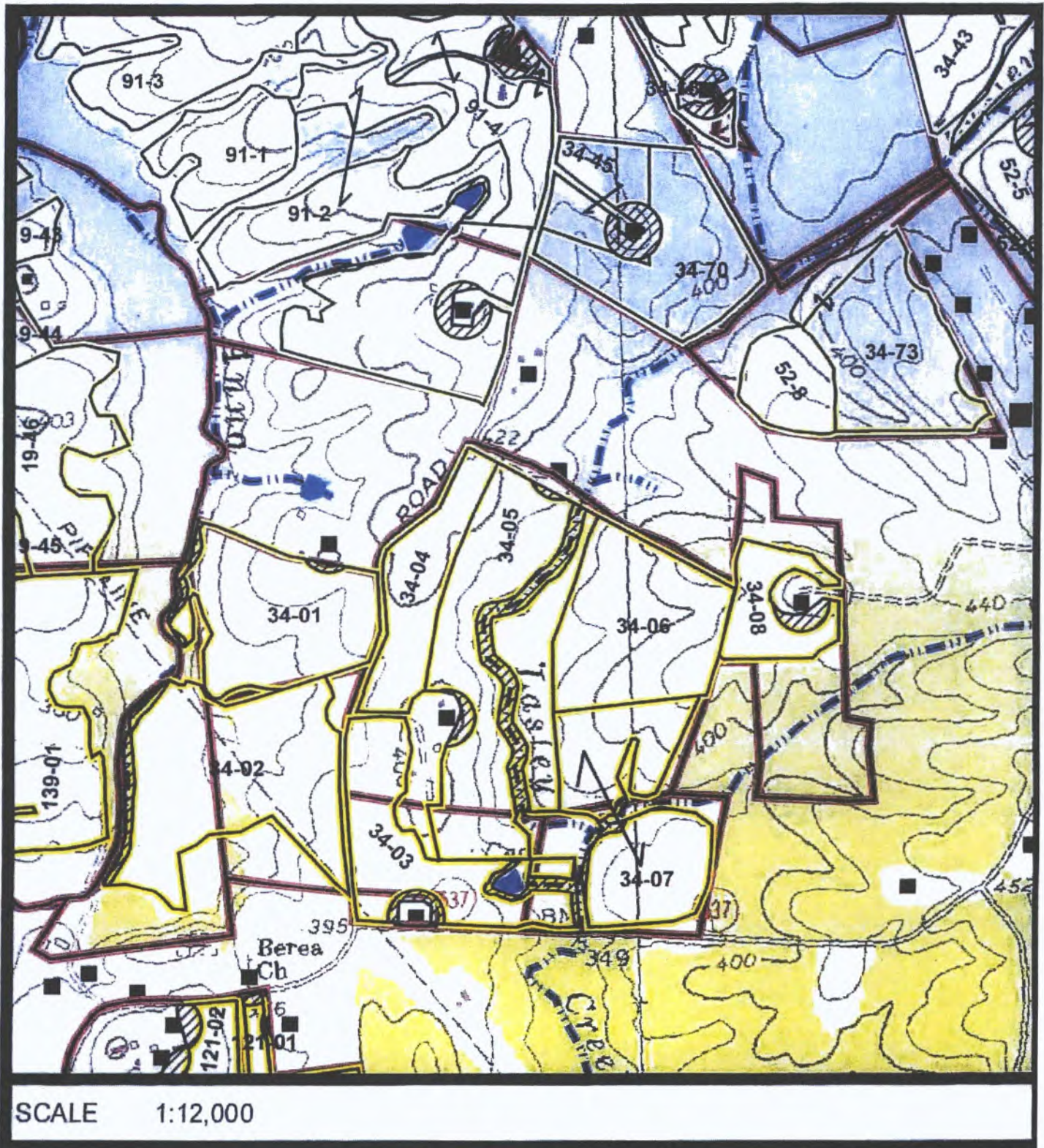


SOIL MAP



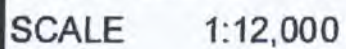
Environmentally Sensitive Soil



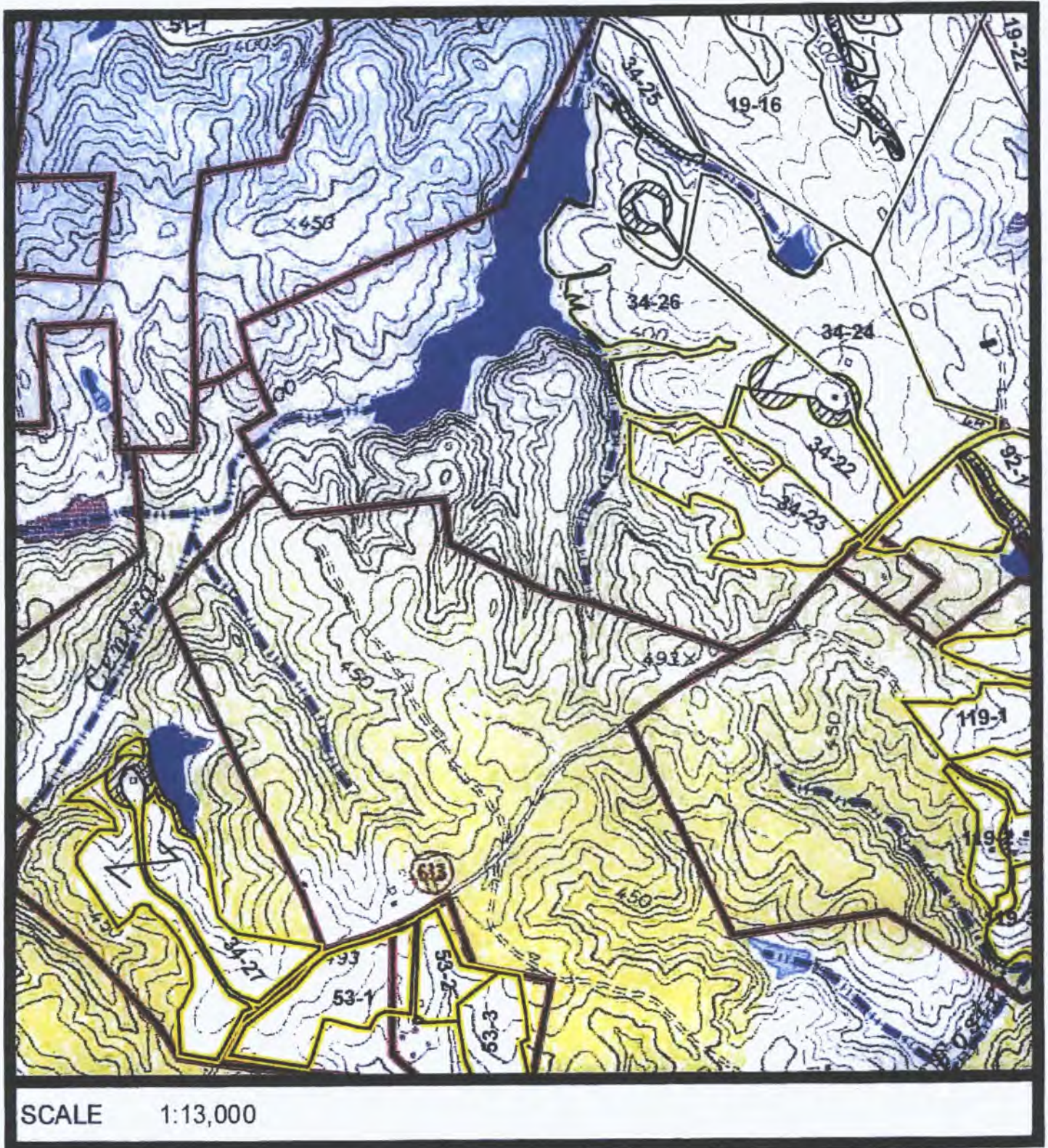


TOPO MAP





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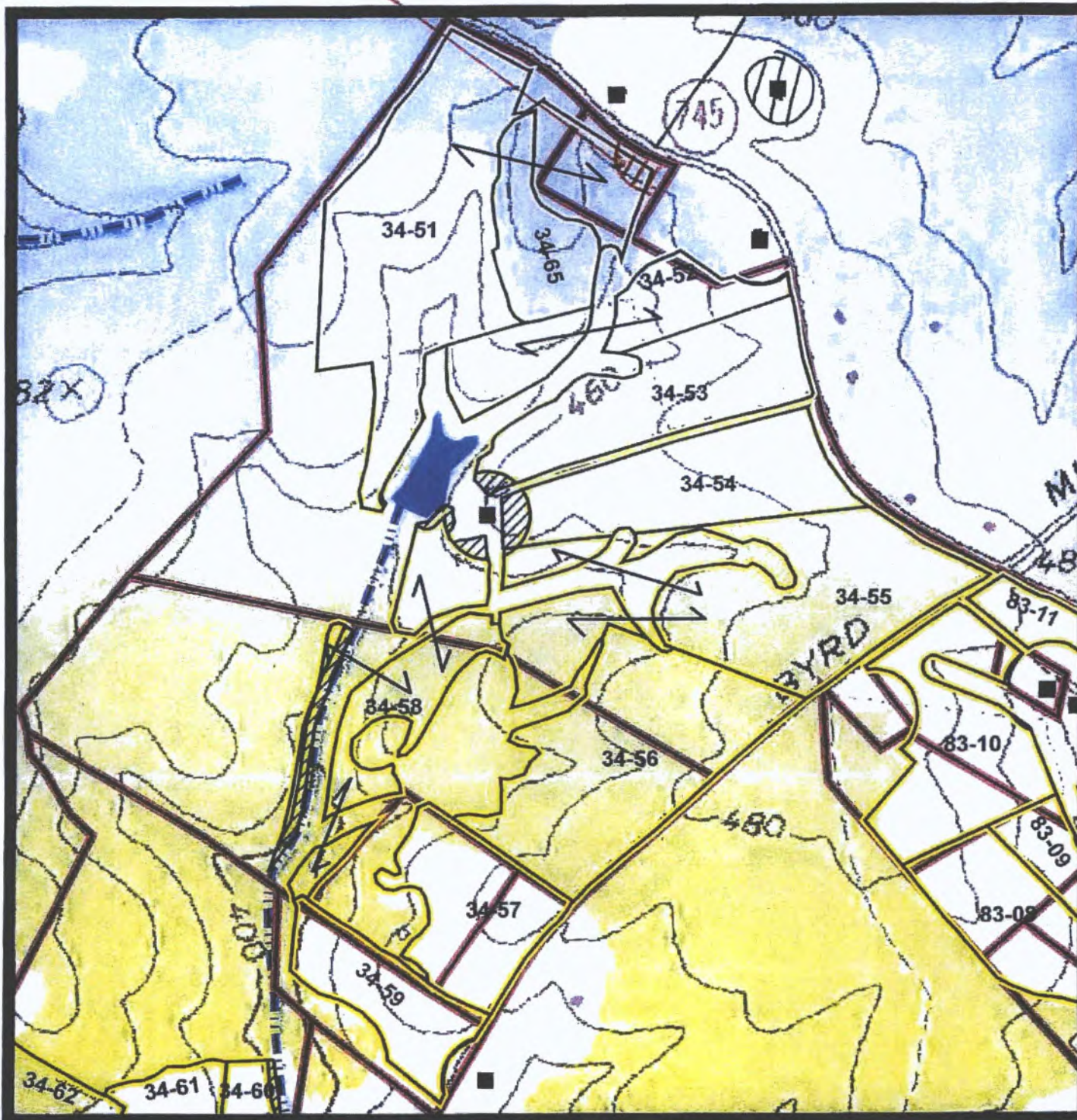
TOPO MAP



DEQ
200ft
Buffer

SYNAGRO

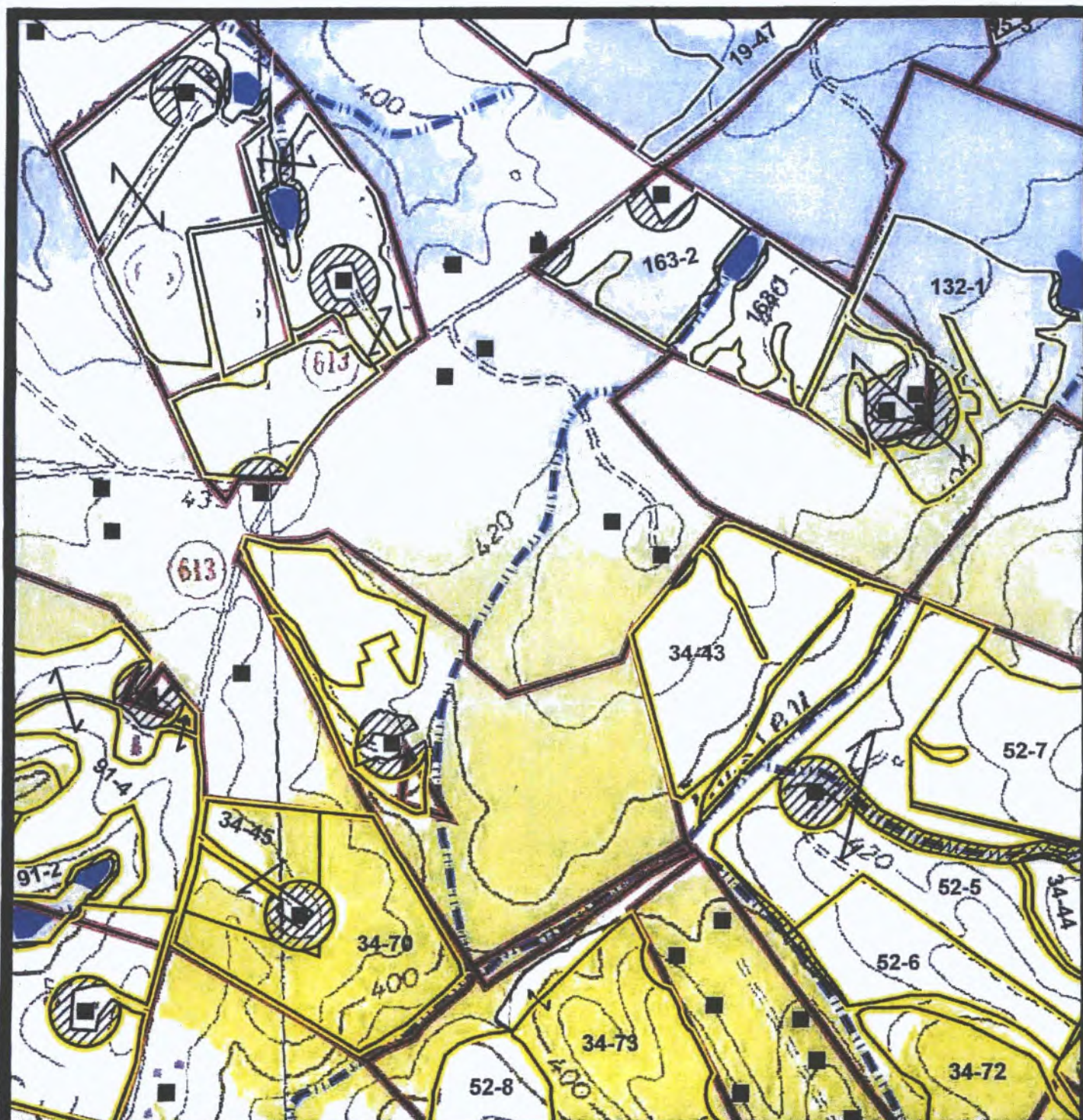
Charles Rosson
LO34



SCALE 1:8,000

TOPO MAP

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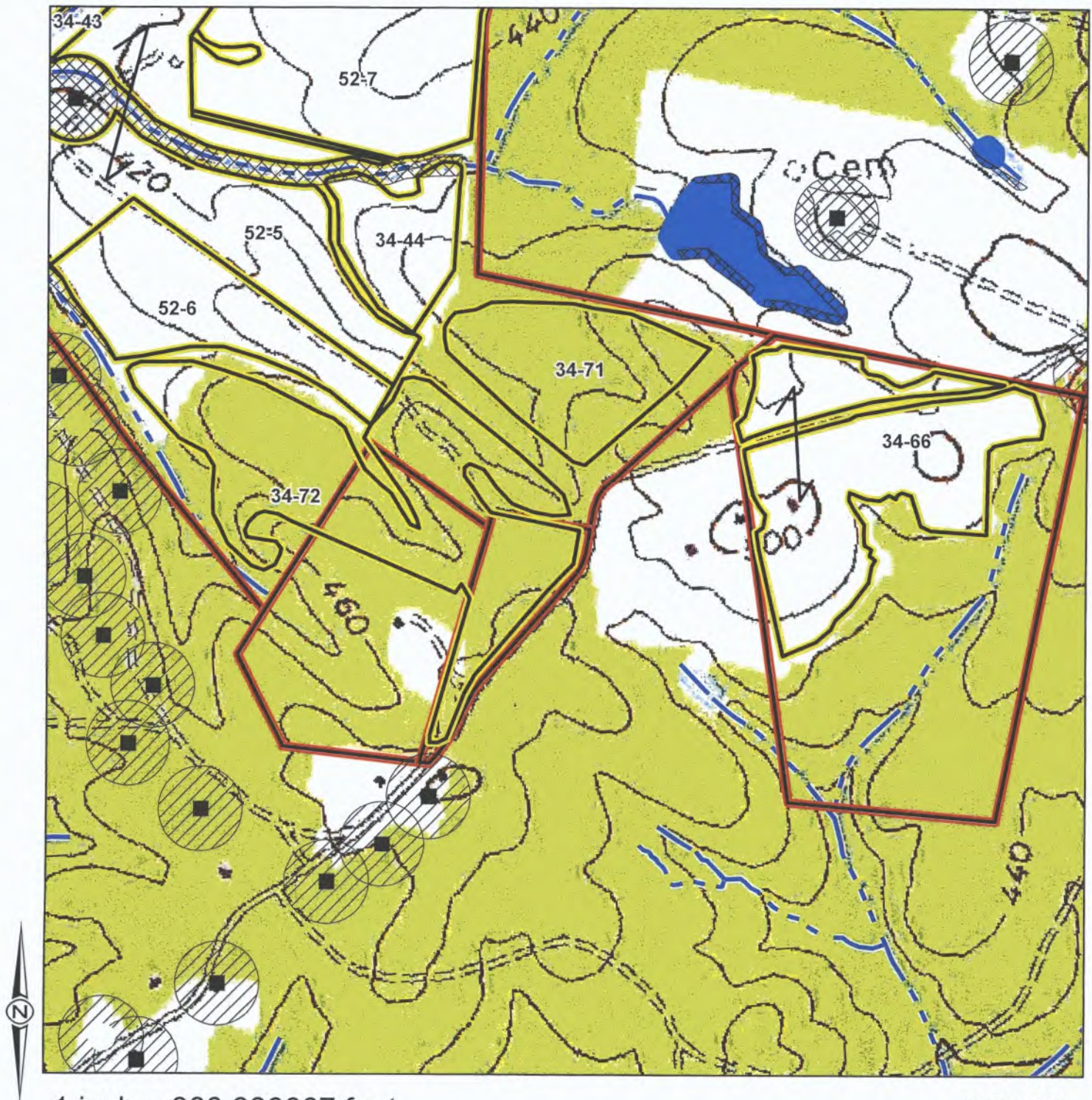
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TOPO MAP



SYNAGRO

Charles Rosson
LO 34
Fields 44, 66, 71, 72



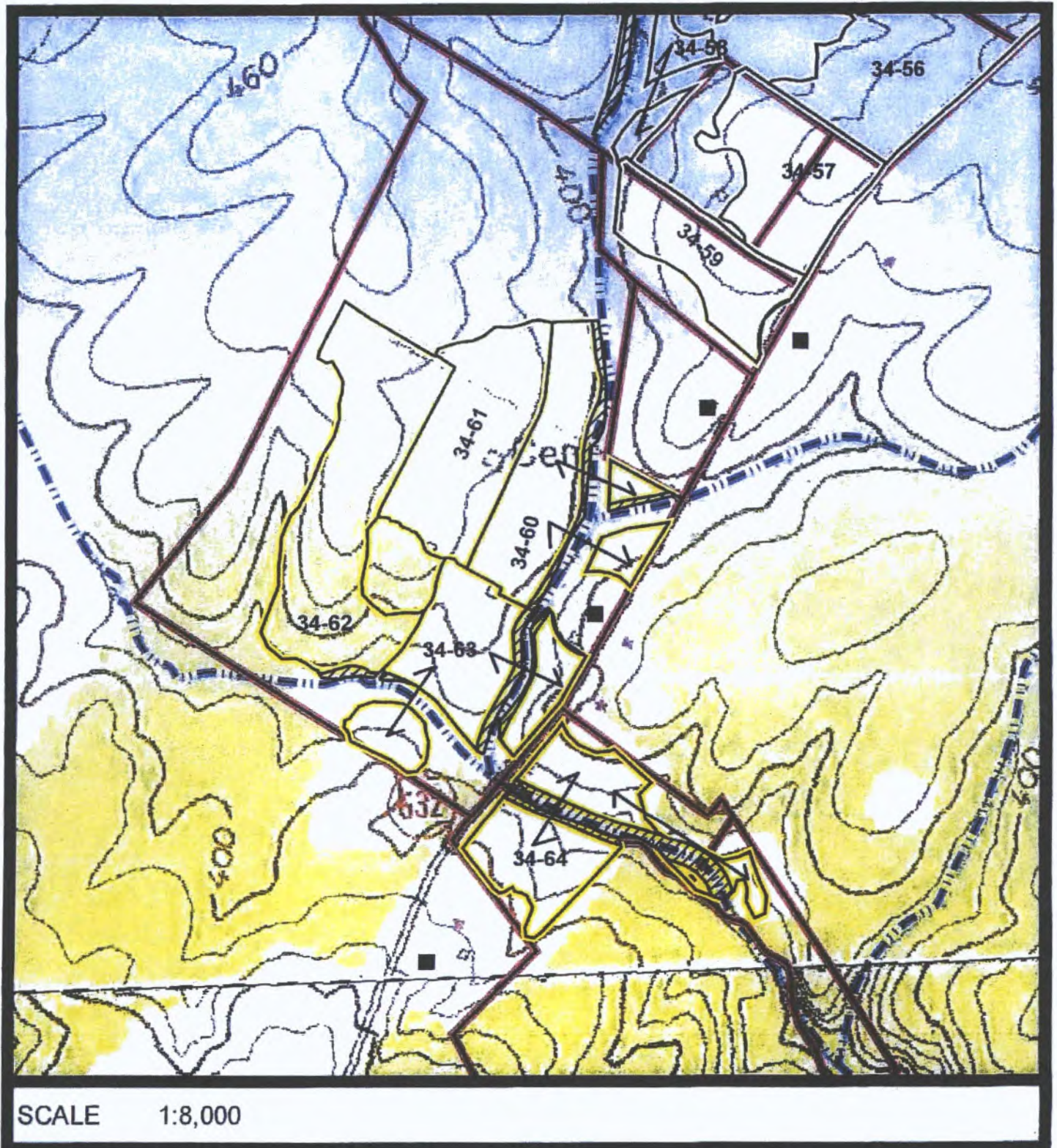
1 inch = 666.666667 feet

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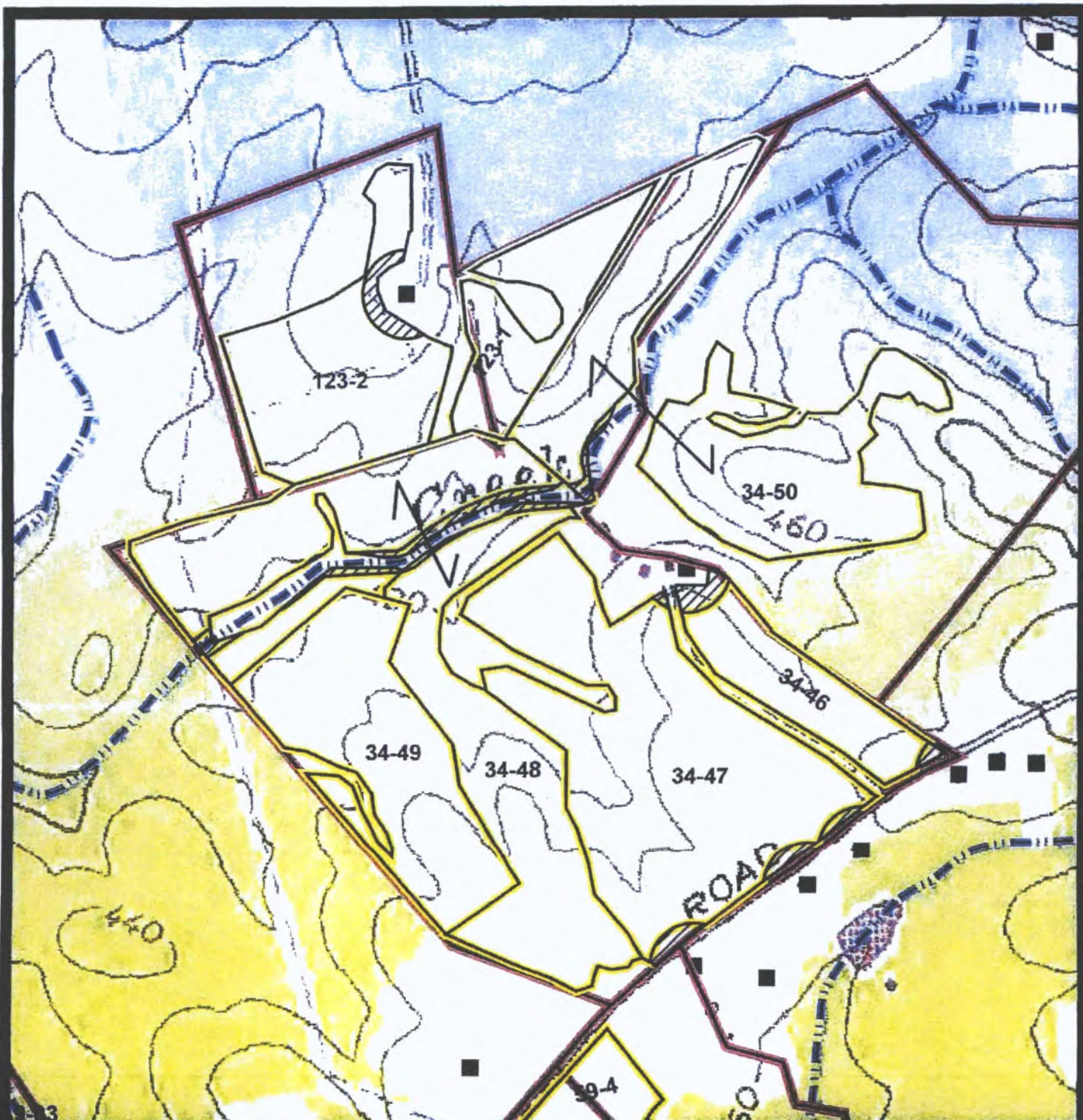
TOPO MAP

Field	Acres
34-44	8.0
34-66	24.5
34-71	13.1
34-72	22.8

Revised 11-12-15



TOPO MAP



SCALE 1:8,000

TOPO MAP

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SCALE 1:6,000

TOPO MAP

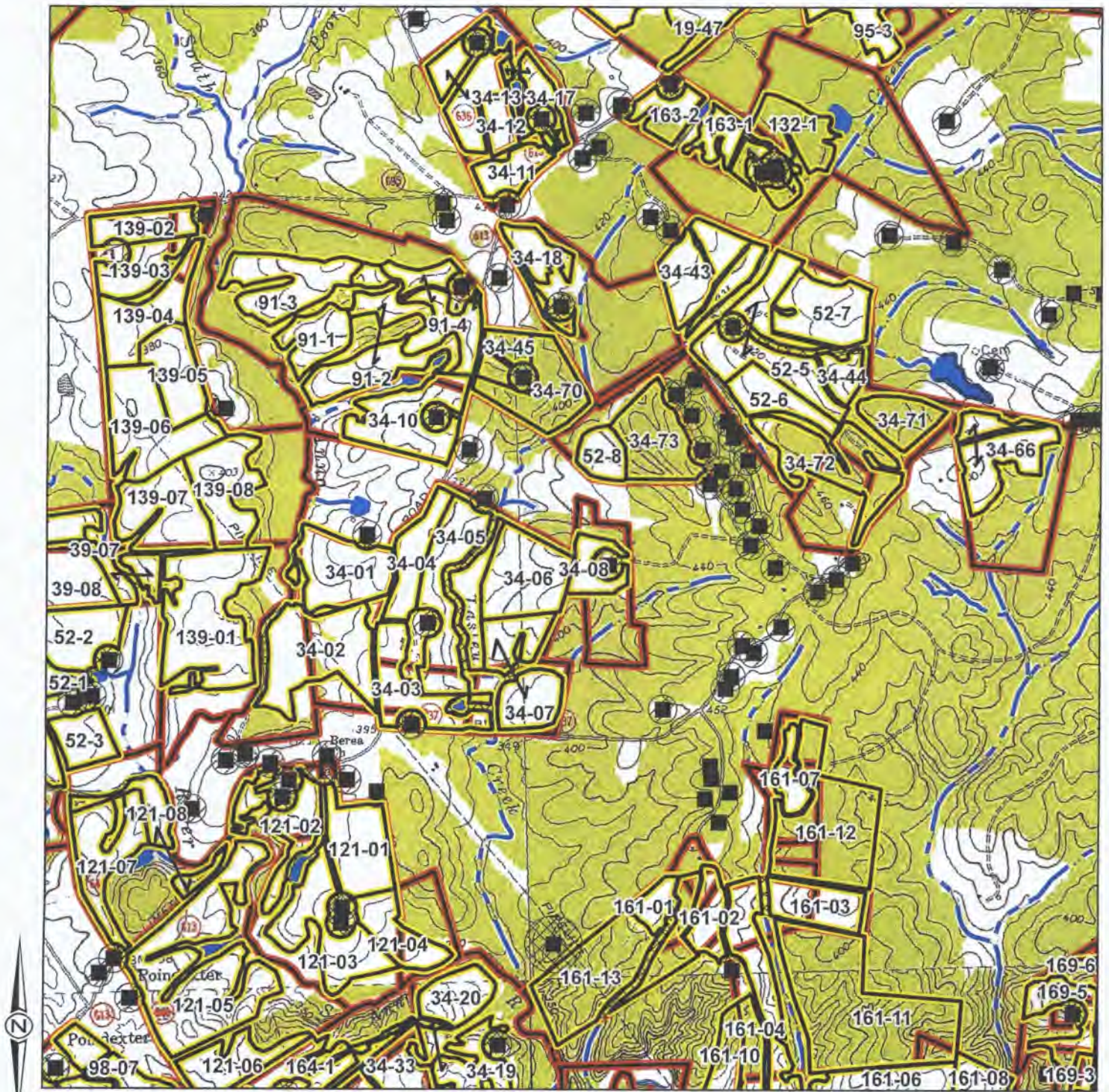
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SYNAGRO

Charles Rosson

LO 34

Fields 1-13, 17-20, 43, 44, 66, 70-73

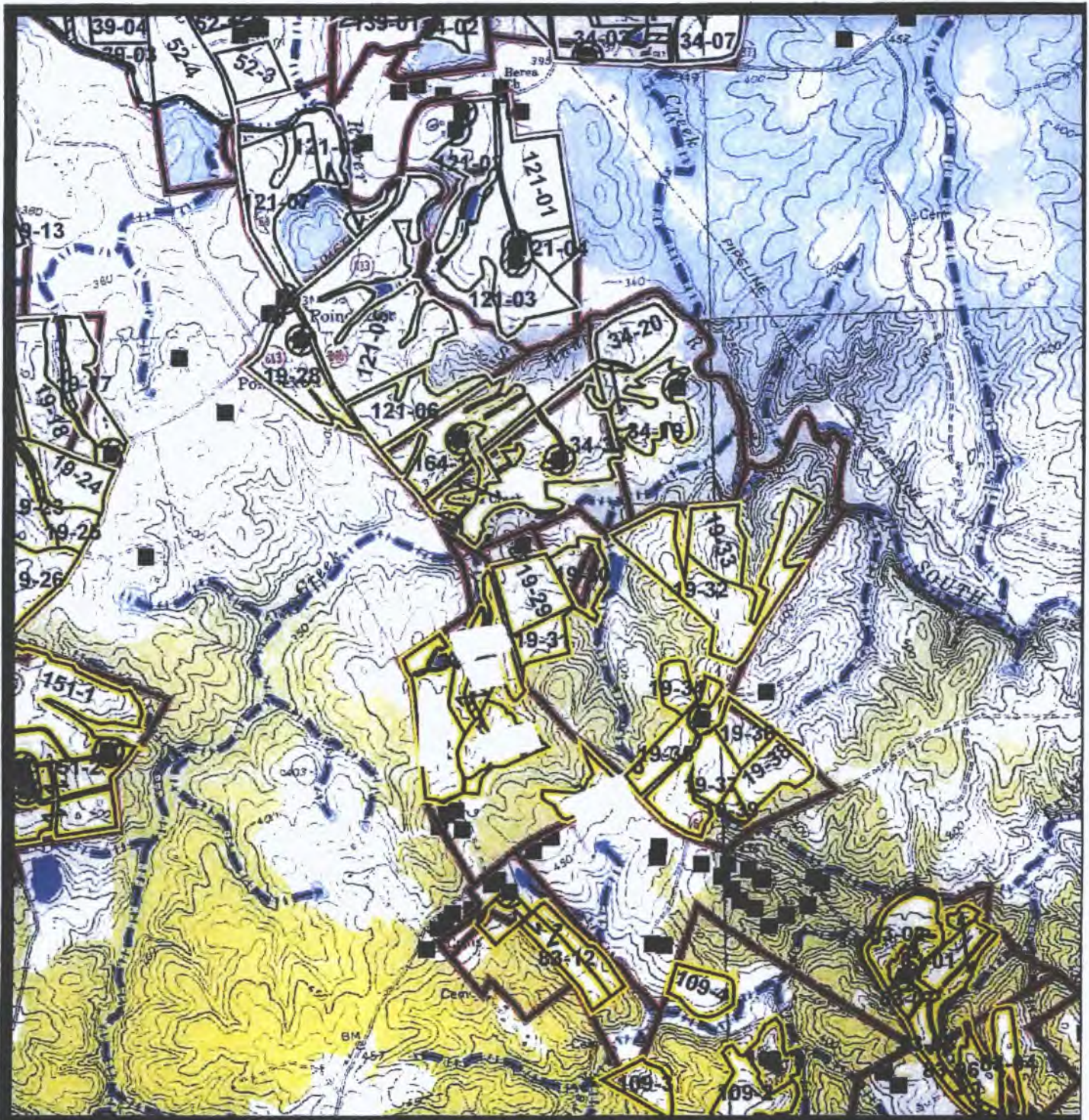


1 inch = 2,000 feet

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TOPO MAP

Revised 11-12-15



SCALE 1:24,000

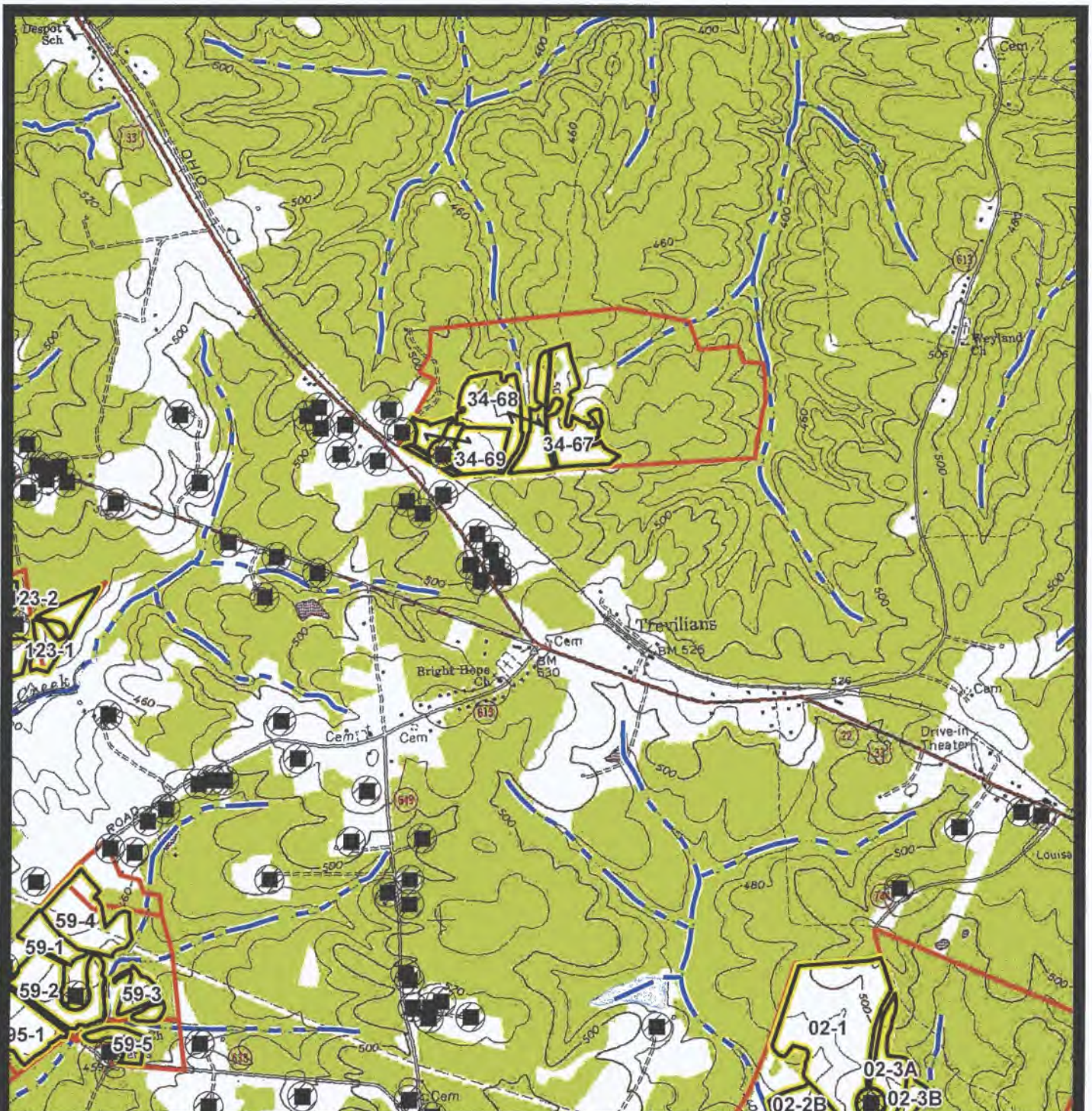
TOPO MAP



Charles Rosson
LO34
Fields 22-27



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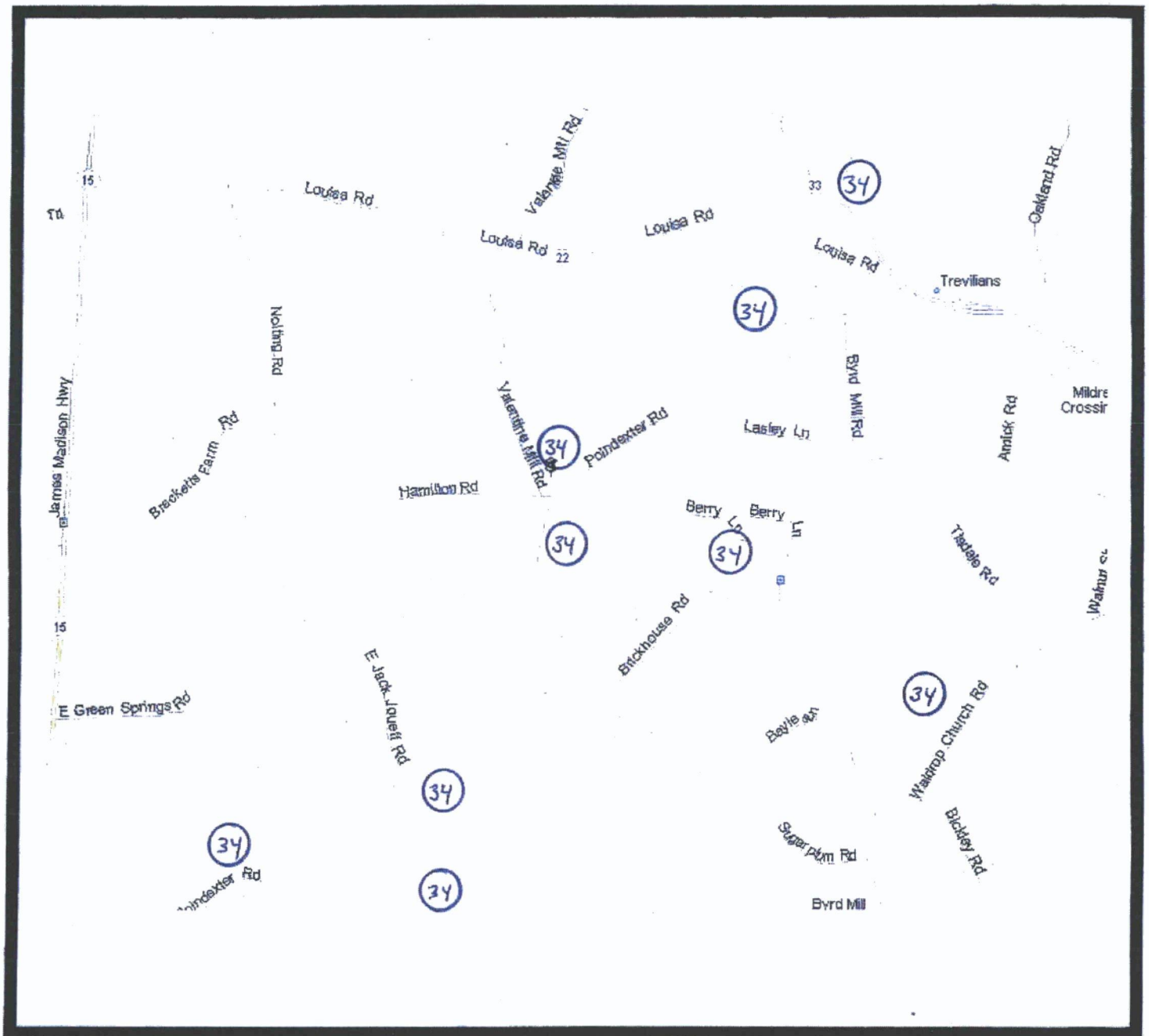


SCALE 1:24,000

REVISED 9-15-15

TOPO MAP





LOCATION MAP

